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I. INTRODUCTION

A. PHLEBOTOMY IN THE MIDDLE AGES

That medieval texts frequently have much to tell the scholar beyond the immediate treatment of their subject matter is a truism well illustrated by the eleven-page treatise "Of Phlebotomie," attributed to Henry of Winchester in Cambridge, Gonville and Caius College MS. 176/97. At superficial inspection, this work is one example of the many Middle English bloodletting treatises that circulated in the fifteenth century. Yet a thorough study of this text of little apparent consequence can teach us much. When we pursue its sources, for example, we find that "Of Phlebotomie" is a careful Englishing of a much earlier academic Latin phlebotomy in wide circulation, and we begin to learn something about both sources and audience for medical literature in fifteenth-century England. When we consider the entire codex of which this is a part, we can infer even more about the interests and organization of that community. At the same time, a comparison of the Latin and English phlebotomies allows us to learn something of the nature of the English language at the end of the fourteenth century and something of the difficulties that English translators of that period faced as they tried to turn technical medical/scientific Latin prose into the vernacular.

The monastic physicians of the early Middle Ages had available to them only a debased version of the elaborate system of phlebotomy constructed by Galen and other Hellenistic physicians upon Hippocratic foundations. Perhaps the closest thing to a systematic treatment of the subject available to them was the anonymous *Epistula de phlebotomia* or *Phlebotomia Hippocratis*, dating back to at least the beginning of the ninth century, which incorporates a few corrupt scraps of Greek terminology that suggest something of its heritage.¹ This work explains from which vein a patient can

¹ No really satisfactory historical account of the theory and practice of bloodletting exists; the standard survey, Karl Josef Bauer, *Geschichte der Aderlässe* (Munich, 1870), has many shortcomings. A brief introduction to some of the themes of Hippocratic and Galenic phlebotomy is incorporated in John B. deC. M. Saunders and Charles Donald O'Malley, *Andreas Vesalius Bruxellensis: The Bloodletting Letter of 1539* (New York, n.d.), pp. 7–15.

The *Epistula de phlebotomia* survives in at least twenty-eight manuscripts; see Pearl Kibre, "Hippocrates Latinus: Repertorium of Hippocratic Writings in the Latin Middle Ages (V)," *Traditio* 35 (1979): 284–85. Kibre classifies the texts according to five incipits. Two versions with the incipit "Quid est flebotomia? (Id est) Vena recte incisio et sanguinis emissio . . .," have been edited. Romuald Czarnecki has edited the text from the ninth or tenth-century codex Florence, Laur. Plut. 73 cod. I, fols. 140r–41v, in *Ein Aderlasstraktat angeblich des Roger von Salerno samt einem lateinischen und einem griechischen Texte zur Phlebotomia Hippocratis* (Inaug.-Diss., Leipzig, 1919), pp. 25–30, and Arthur Morgenstern, *Das Aderlassgedicht des Johannes von Aquila* (Inaug.-Diss., Leipzig, 1917), pp. 64–73, has published a ninth-century version from Brussels, Bibl. Roy. 3701-15 (3702), I, fols. 10v–11r.

profitably be bled, emphasizing the use of the three great veins of the arm—*cephalica*, *mediana*, and *epatica*.² The *Epistula* was widely distributed in monastic libraries—at Monte Cassino, St. Gall, Echternach, and no doubt elsewhere—and was probably a standard guide to the bloodletting that as a prophylactic measure was often a regular part of the cloister's annual routine.³

However, the *Epistula de phlebotomia* was far from the only guide to bloodletting and its uses that circulated in the early Middle Ages. Another—somewhat simpler—early survey of the subject begins “Omni tempore die et nocte si necessitas urget . . .”; it exists in three manuscripts of the ninth century, and has been attributed, probably mistakenly, to Bede, but it has not been studied carefully.⁴ Rather different in approach is the *Epistula de sanguine cognoscendo*, also extant in ninth-century manuscripts—in one, a companion text to the *Epistula de phlebotomia* and “Omni tem-

² The sources of the name *cephalica* (and the later use of *basilica* as a synonym for *epatica* or *mediana*) are complex. Owsei Temkin, “The Byzantine Origin of the Names for the Basilic and Cephalic Veins,” *XVIIe Congrès International d'Histoire de la Médecine*, 1. *Communications* (Athens, 1961): 336–39; rpt. *The Double Face of Janus* (Baltimore, 1977), 198–201, points out that the names *basilica* and *cephalica* are found in writings on phlebotomy, not classical anatomies or surgeries. He has found one exception: the use of these terms in Arabic by Ḥunain ibn Ishāq in an addition to his translation of Book 10 of Galen's “Anatomical Administrations.” We would point out that Hunain's terms for the two veins are also to be found in the bloodletting example in his *Questions on Medicine for Scholars* (known in the Latin tradition as the *Isagoge* of Johannitius); see the English translation by Paul Ghalioungui (Cairo, 1980), p. 34. This use by Ḥunain seems to confirm Temkin's tentative conclusion that the terms derive from bloodletting treatises, practical medicine, rather than from the anatomical texts of antique writers.

In a recent article, “Vena basilica—Vena cephalica,” *Sudhoffs Archiv* 64 (1980): 385–90, Hans Oesterle, apparently unaware of the Temkin evidence, presents a complicated argument that the term *basilica* took on the meaning arm vein because of confusion in tenth-century Arabic adaptations of Syriac terms.

³ See Kibre, pp. 284–85, and, for the early monastic manuscripts, see Augusto Beccaria, *I Codici di Medicina del Periodo Presalernitano* (Rome, 1965), Nos. 95 (Monte Cassino), 129, 131, 133, 137 (St. Gall), and 35 (Echternach).

On routine monastic bloodletting, see Walter Horn and Ernest Born, *The Plan of St. Gall* (Berkeley, 1979), 2: 186–88, and references there. Another ninth-century phlebotomy that deals with the three arm veins and survives from St. Gall (although the hand is Italian) is to be found on pp. 252, 255 of *Vademecum eines frühmittelalterlichen Arztes: Die gefaltete lateinische Handschrift medizinischen Inhalts im Codex 217 und der Fragmentensammlung 1396 der Stiftsbibliothek in St. Gallen*, ed. Peter Köpp, Veröffentlichungen der Schweizerischen Gesellschaft für Geschichte der Medizin und der Naturwissenschaften, 34 (Aarau, 1980), pp. 25–27. This brief text too is quite practical, dealing with procedure and pre- and post-operative treatment, but there is no therapeutic focus. It contains some scraps of Greek (e.g., *anacarsim* and *catatexim*), and the authority cited, albeit in a monitory way, is Hippocrates: “Ide cum cautella fiat sicut Yppogratis dicit: si quis perfectus medicus uult esse, semper timeat” (p. 255).

⁴ The work follows the *Epistula de phlebotomia* in the Brussels MS. 3701-15 (3702) mentioned in n. 1, at fols. 11v–12 (see the Morgenstern edition, *Das Aderlassgedicht*, pp. 64–73); it also exists in Laon and Arundel codices. Attributed to Bede in PL XC, 959–962, the text was reprinted by J. A. Giles, *The Complete Works of Venerable Bede* (London, 1843), 6: 349–352. On the authenticity of the work as attributed to Bede, see Charles W. Jones, *Beda's Pseudepigrapha* (Ithaca, 1939), pp. 88–89. A similarly compound text, also beginning “Omni tempore si necessitas urget . . .,” was regularly included in the sixteenth-century editions of the works of Arnald of Villanova.

pore"; this work presumes a knowledge of bloodletting techniques, and explains to the reader how an examination of the color and quality of the blood removed can serve as a guide to the patient's prognosis.⁵

During the late eleventh and twelfth centuries Salerno in southern Italy began to take on importance as a center of increasingly formalized and even scholastic medical education, profiting from its closeness to the remnants of Byzantine civilization. Diverse Greco-Roman materials like the *Epistula de phlebotomia* began to be drawn together by the Salernitan physicians and to be reworked in somewhat more systematic fashion. The phlebotomy treatise attributed with some plausibility to the Salernitan Archimathaeus (ca. 1150) depends heavily upon the *Epistula de phlebotomia* for its account of what veins are to be opened and for what reasons, while adding material on the proper treatment of the patient.⁶ A later version of this "Archimathaeian" treatise—still evidently of the twelfth century—incorporates the sort of material found in the *Epistula de sanguine cognoscendo* in a long section on *discretio sanguinis*, explaining how the physician may judge the condition of the patient from the appearance, smell, and feel of the blood withdrawn; this version has been published under the name of the illustrious surgeon, Roger of Salerno (fl. ca. 1170). (The attribution may be somewhat insecure, however, since Roger's most famous work, his *Surgery*, seems to assign very little importance to therapeutic or prognostic phlebotomy.)⁷ Indeed, an indebtedness to pre-Salernitan texts is easy to detect in most bloodletting discussions of the twelfth century: thus, for example, the short work "On Blood-Letting," published by Charles Singer and dated by him to ca. 1110, is comprised principally of extracts from the *Epistula de phlebotomia* inserted into "Omni tempore."⁸

⁵ This text is also in Brussels MS. 3701-15 (3702), fols. 13r-14v (see n. 1); it has been edited from this codex and from Berlin, Deutsche Staatsbibl., Philipps MS. 1790, fols. 47v-50r, by Dietrich Blanke, *Die Pseudohippokratische "Epistula de Sanguine Cognoscendo"* (Inaug.-Diss., Bonn, 1974). For a general treatment of the use of bloodletting for prognostic and diagnostic rather than therapeutic purposes, see Gundolf Keil, "Makroskopische Hämatoskopie," *Proceedings*, 23rd Inter. Cong. Hist. Med., 1 (London, 1974): 100-104.

The Brussels codex also contains another bloodletting excerpt, "De incisione (incisura)," on fol. 14v (identified in four other manuscripts as well by Kibre, pp. 285-86).

Yet another widely diffused early phlebotomy fragment is the short encomium to the usefulness of bloodletting—"Phlebotomia est initium sanitatis, mentem sincerat . . ."—published by Salvatore de Renzi at the end of the treatise *De quatuor humoribus in Collectio Salernitana*, 2 (Naples, 1853): p. 412. *De quatuor humoribus* is contained in the ninth-century manuscript, Paris, B.N. 11219, fol. 103rv, but it breaks off just before the bloodletting passage; however, according to Beccaria (*I Codici*, p. 170), a leaf is missing. This encomium recurs, for example, in the twelfth-century texts identified below in notes 7 and 8; in the latter case, in the versions published by both Singer and Sudhoff.

⁶ Hans Erchenbrecher, *Der Salernitaner Arzt Archimathaeus und ein bis heute unbekannter Aderlasstraktat unter seinem Namen* (Inaug.-Diss., Leipzig, 1919).

⁷ Czarniecki, *Ein Aderlasstraktat*; see especially pp. 20-21.

⁸ Charles Singer, "A Review of the Medical Literature of the Dark Ages, with a New Text of about 1110," *Proc. Roy. Soc. Med.* 10 (1917), Sect. Hist. Med.: 130-133; the manuscript that Singer discusses is Oxford, St. John's College MS. 17. "Omni tempore" and the *Epistula* also underlie the short text published from Vienna MS. 143 by Karl Sudhoff, *Beiträge zur Geschichte der Chirurgie im Mittelalter*, 1 (Leipzig, 1914): 168-169, copied in the twelfth century.

The gradual introduction of Arabic medical literature to the West during the twelfth century came eventually to exert its own influence upon the techniques of bloodletting, as it did upon so many areas of medicine. The contributions of Constantine the African in particular seem to have expanded the knowledge of medical writers and to have encouraged them to try to assimilate this new knowledge into a still more organized form. Constantine's *Viaticum* and *Megatechni* (the latter a condensation of Galenic therapeutics) contained scattered references to the utility of phlebotomy in various illnesses. In his *Pantechni* (more accurately, his version of 'Alī ibn al-'Abbās' *Kitāb al-mālikī*) he provided two informative chapters on the practical side of phlebotomy that went well beyond the statements of the early *Epistula*. He offered advice to the reader on how to ligature a limb to make the vein visible, how and in what direction to make the incision while taking care not to cut a nerve, on how to tell from a patient's pallor or upset stomach that he should be bled of small quantities in several stages rather than of a large quantity all at once. Furthermore, he enlarged the reader's anatomical horizons by giving a much fuller list of veins from which blood might beneficially be withdrawn; in particular, he identified *five* such veins in the arm, adding to the three of the Greco-Roman tradition two more from Arabic knowledge—the *vena titillaris* and the *funis brachii*.⁹

In the second quarter of the thirteenth century, a new set of translations from the Arabic began to enter Western medical schools, most importantly the works of Galen and the authoritative *Canon* of Avicenna. These texts do not seem materially to have altered the theory (or practice) of phlebotomy—Avicenna's chapter in the *Canon*¹⁰ does not contradict what the thirteenth century had already learned—though they forced the schoolmen to place increased emphasis upon the rational organization of information, so that the new texts could be assimilated to the old. Perhaps this contributed to the increasing tendency for the physicians to see themselves as guardians of the science of phlebotomy, and to assign the actual performance to an operator working under their supervision. In fact, in many parts of Western Europe, bloodletting seems as an *operatio manualis* to have become routinely carried out by the medical practitioners of lower status, the surgeons and barbers, though there is no convincing reason to suppose that learned physicians did not themselves continue to practice phlebotomy when they found it necessary.

At universities south of the Alps, to be sure, surgery was apparently incorporated as an academic discipline into faculties of arts and medicine as early as the late thirteenth century.¹¹ Students of Bologna and Padua

⁹ *Pantechni*, practica, lib. IX capp. 2–3, in *Omnia Opera Ysaac* (Lyons, 1515), (II), fol. 119r–v. Joseph Hyrtl, *Das Arabische und Hebräische in der Anatomie* (Vienna, 1879; reprinted Wiesbaden, 1966), traces the term *funis brachii* back only to Avicenna (pp. 120–21).

¹⁰ Avicenna, *Liber Canonis* (Venice, 1507; reprinted Hildesheim, 1964), lib. I, fen 4, cap. 20; fols. 73v–77r.

¹¹ See Nancy G. Siraisi, *Arts and Sciences at Padua: The Studium of Padua Before 1350* (Toronto, 1973), pp. 165–68; idem, *Taddeo Alderotti and His Pupils* (Princeton, 1981), pp. 108–10.

read the *Chirurgia* of Albucasis (translated, like the *Canon*, by Gerard of Cremona), which presented perhaps the most elaborate and authoritative account of venesection readily available in the West. Albucasis enumerated thirty veins accessible for bleeding; gave detailed descriptions of the different techniques to be employed in opening each of the more important veins (most manuscripts still incorporate drawings of the variously appropriate lancet-shapes¹²); and explained very fully the preparation and post-operative treatment of the patient essential for best results.¹³ Albucasis's surgical discussion, though much more detailed, did not differ significantly from the shorter accounts found in the more general medical encyclopedias of Haly Abbas and Avicenna. In any case, by the end of the thirteenth century a fully elaborated analysis of the practice of bloodletting had been worked out. The following sketch gives a cursory picture of the technique as it stood by ca. 1300.¹⁴

Phlebotomy can be done to preserve the health or to cure an existing illness, by removing excessive or unhealthy humors—for blood of course contains an admixture of all four humors. The procedure is indicated in gout, pleurisy, quinsy, fevers, inflammations, and many other illnesses; but the weak and the critically ill should not be bled, nor those suffering from certain specific ailments like cataract or dropsy. Children under a certain age—variously specified as being between nine and fourteen—and adults over 70, as well as pregnant women, should not be bled either. The moment when the bloodletting is to be carried out is a matter for particularly careful judgment. The immediate needs of an acute disease may give the physician little choice, but if an individual opts for bloodletting as part of a normal healthy regimen, the physician should carry out the operation in a temperate season, the spring or fall, during a phase of the moon which corresponds to the phase of life of the patient. Avicenna recommends the morning hours, but others link the exact time of the operation more precisely to the humor to be evacuated—thus, for example, recommending that melancholic blood be drawn between 3 PM and evening, and so forth. If illness compels an immediate bloodletting, the exact site of the operation is crucial. A general rule has it that for humoral excess from the neck up, the cephalic vein is opened; from the neck down, the

¹² On this, see Karl Sudhoff, *Beiträge zur Geschichte der Chirurgie im Mittelalter*, 2 (Leipzig, 1918): pp. 62–63 and Plate XIX.

¹³ We have used the text provided by MS. Milan, Ambros. R. 76 sup., of the fourteenth century, in which the material *de flebotomia* is numbered as lib. II cap. c (fols. 69r–72v). An English translation of the Arabic text which is very close to the Latin version may be found in M. S. Spink and G. L. Lewis, eds.; Albucasis, *On Surgery and Instruments* (Berkeley and Los Angeles, 1973), Book II, chapter 95; pp. 624–55.

¹⁴ This sketch has been drawn together from the discussions in Julius Leopold Pagel, *Die Concordanciae des Johannes de Sancto Amando* (Berlin, 1894), pp. 115–27; E. Nicaise, *Chirurgie de Maître Henri de Mondeville* (Paris, 1893), pp. 532–55; and Lanfranc, *Practica quae dicitur ars completa totius chirurgiae*, doct. 3, tract. 3, cap. 16, as printed in the collection entitled *Ars Chirurgica Guidonis Cauliaci* (Venice, 1546), fols. 249r–250r. An English translation of the last item is included in Edward Grant, *A Source Book in Medieval Science* (Cambridge, Mass., 1974), pp. 799–802.

basilic or hepatic vein; and for either sort of excess, the median or cardiac vein. (The nomenclature of the veins had by the thirteenth century grown less uniform.) But each vein in the body is also a vein of choice for certain specific illnesses. Thus (to give only two examples) bleeding from the vein in the forehead is good for mental disorders, while bleeding from the saphenous vein (on the inside of the ankle) is good for disorders of the womb and can bring on menstruation. Where a choice presents itself (as in the latter case), the physician should bleed from the right side in spring and summer, from the left in fall and winter.

An individual who is to be bled may bathe the preceding evening, to improve the movement of the blood; generally, he should eat lightly, if at all, and should be of calm mind. At the appointed time, the physician or his operator will give him a stick to grasp (to help swell the vein) and a basin to catch the blood, will bind a medium-tight ligature around the arm if one of its veins is to be opened, and then will make an incision in the vein selected—usually but not always lengthwise—taking due precaution to avoid nearby nerves or arteries. [Plate I.] The stronger the patient, the more blood can be withdrawn. Eventually, drugs and a bandage will be applied to stop the bleeding. Afterwards the patient should relax, perhaps sleep, and eat only light, digestible foods for three days. Meanwhile, the physician can form an opinion of the patient's state of health from the blood withdrawn, according to a number of subtle indicators: the manner in which it flowed from the vein and fell into the bowl; its color, odor, and substance; and the manner in which it clotted.

This cursory sketch of phlebotomical practice remains valid for at least two hundred years. The most striking novelty of fourteenth- and fifteenth-century phlebotomy does not involve practical technique or theory; it is the appearance of manuscript illustrations intended to show the specific points on the human body from which blood can be withdrawn. The amount of textual material accompanying these illustrations varies widely. Some appear without any text at all, so that the ignorant reader would be unable to determine, for example, which point on the arm illustrated the *vena basilica*. Others are more careful, and name the veins in question. A third group not only names the veins, but summarizes the benefits that bloodletting from each confers. Rarely do these illustrations accompany a lengthy or particularly learned text: Plates II and III are perhaps typical.¹⁵ A further feature of this later bloodletting literature is the appearance of texts, illustrated and unillustrated, in the European vernaculars: Karl Sudhoff has called attention to a number of these in a variety of languages—German, French, Italian, Czech, and Irish.¹⁶ Both these novelties indicate

¹⁵ For other examples of bloodletting men, see Peter Murray Jones, *Medieval Medical Miniatures* (London, 1984), and Harry Bober, "The Zodiacal Miniature of the *Très Riches Heures* of the Duke of Berry—Its Sources and Meaning," *Jnl. of the Warburg and Courtauld Institutes* 11 (1948): 1–34, especially Plates 1, 5–11.

¹⁶ Karl Sudhoff, *Beiträge zur Geschichte der Chirurgie im Mittelalter*, 1 (Leipzig, 1914): pp. 185–97. Today a number of such vernacular materials on bloodletting are being studied—

that after 1300 phlebotomy was becoming the property of the empiric as well as of the academically-trained physician or surgeon.

B. THE LATIN TREATISE

The underlying Latin text with which we are concerned in this study is easy to situate against the preceding summary. It repeatedly cites the *Megatechni* and *Viaticum* of Constantine the African, but even without these references its dependence upon Constantinian material would seem likely, for it incorporates without comment Constantine's enumeration of the veins, adding the *vena titillaris* and *funis brachii* to the cephalic, median, and basilic veins of the earlier literature. We have not pressed the search for its other sources, which remain to be discovered, but it should at least be pointed out that it has very little resemblance to the *Epistula de flebotomia*, which had served previous generations so dependably. It is evidently the work of a moderately learned and probably academic physician writing ca. 1150–1225; it can scarcely be later than 1225, for then it would be likely to claim Avicenna and Galen as its authorities rather than Constantine.

The "Henry of Winchester" to whom the English translation (and two manuscripts of the Latin text) attribute the work fulfills these criteria—he was a master at Salerno's rival, the medical school of Montpellier, early in the thirteenth century¹⁷—but he is by no means the only candidate for its authorship. Other Latin manuscripts assign it to Richardus Anglicus, Gualterus (Agilon?), Galenus Secundus Salernitanus, Roger, and Maurus of Salerno—all figures of approximately the right period: Maurus, under whose name the text has already been roughly edited by Buerschaper, is perhaps the most plausible candidate aside from Henry. Henry's relative obscurity at least makes it unlikely that the work was attributed to him to give it the spurious authority of a renowned name; on the other hand, a passage included in the two manuscripts used by Buerschaper (but not present in our edition below) is more consonant with a Salernitan origin: it follows immediately after the text's discussion of phlebotomy in "*effimera febre*," and explains that "fevers of this sort . . . are called *effimere* by Salernitans, but some of them are called putrid fevers by masters of Montpellier."¹⁸ It may also be an indication of origin that two of the prose

e.g., as in *The Commonplace Book of Robert Reynes of Acle* (ed. Cameron Louis; Garland, 1980), pp. 157–61, 378–80; or Katharina Wäckelin-Swiagenin, *Der "Schöpfheimer Codex," ein Medizinallbuch aus dem zweiten Viertel des 15. Jahrhunderts* (Aarau, 1976), pp. 65–87.

Another aspect of later medieval concern with phlebotomy was the academic question of whether phlebotomy should rightly be considered medicine or surgery. It was raised, for example, by Dino del Garbo; see *Dyni florentini super quarta fen primi Avicenne preclarissima commentaria que dilucidatorium totius practice generalis scientie nuncupatur* . . . (Venice, 1514), fol. 116.

¹⁷ On Henry, see Michael McVaugh, "An Early Discussion of Medicinal Degrees at Montpellier by Henry of Winchester," *Bul. Hist. Med.* 49 (1975): 57–8.

¹⁸ "Nota quod huius modi febres, quae comitantur huius modi apostemata, dicuntur *effimer(ae)* secundum Salernitanos, secundum magistros Montis Pessuli, quaedam dicuntur

"Salernitan questions" edited by Brian Lawn seem to be akin to the text of our phlebotomy.¹⁹ The question of authorship, like that of sources, will clearly depend upon a more careful study of the Latin text and its manuscripts.

However, one comment about the work's relation to the Greco-Roman phlebotomy tradition may not be out of place. Like other works of the twelfth century on bloodletting, ours uses some terminology clearly transliterated from a Greek original. It speaks of *apoforesis* to denote the practice of repeated letting of small quantities of blood (Gr. ἐπαφαίρεσις); it uses *metacentesis* and *antispasis* to characterize the opposed techniques of withdrawing blood, respectively, from the affected part or from a distant part of the body (Gr. μεταχέτευσις and ἀντίσπασις), renamed *derivatio* and *revulsio* in the Renaissance. Where the earlier terms entered Western medical literature is still uncertain, but it is important to realize that by the early thirteenth century their presence does not necessarily imply an author's direct acquaintance with the Greco-Roman material, for by that time they had come into quite common use in Europe, at Montpellier as in Italy.²⁰

The organization of our text sets it somewhat apart from other phlebotomy treatises of its time. These tend to adopt an anatomical orientation, and to be constructed about an enumeration of the veins from which bloodletting can be done. The work attributed to Roger of Salerno, mentioned above, is one example, but the text beginning "Medelam morborum duplicem . . ." (known only in manuscripts of the thirteenth century and later)²¹ provides an even more striking instance of this subordination of pathology to anatomy, stressing as it does the technical consequences for a surgeon's practice that follow from the anatomical relationships of veins and arteries. Such works foreshadow the illustrated bloodletting texts of the fourteenth and fifteenth centuries. Many contemporary treatises also adopt a more or less didactic tone, often quite suggestive of a classroom

putrid(a) e." The text is from MS. D of our edition below, published by Rudolf Buerschaper, *Ein bisher unbekannter Aderlasstraktat des Salernitaner Arztes Maurus: "De Flebotomia"* (Inaug.-Diss., Leipzig, 1919), pp. 15–16.

¹⁹ Items B 132 and B 243 in Lawn's study, *The Prose Salernitan Questions* (London, 1979), are paralleled respectively in our text by lines 152ff. and by lines 88 and *passim*. (On the danger of automatically assuming an Italian origin for these "Salernitan" questions, however, see the review by Luke Demaitre in *Speculum* 56 [1981]: 166.) Our text's occasional inclusion in manuscripts containing undoubted Salernitan material—as seen very clearly in one cited by Montague Rhodes James, *The Ancient Libraries of Canterbury and Dover* (Cambridge, 1903), pp. 482–83—may also speak in favor of an Italian source.

²⁰ For its use at Montpellier in the surgery of William de Congenis (first half of the thirteenth century), see Karl Sudhoff, *Beiträge zur Geschichte der Chirurgie im Mittelalter*, 2 (Leipzig, 1918): pp. 359 and 378. For Italy, see the additions to Roger's *Chirurgia* published by Salvatore de Renzi, *Collectio Salernitana*, 2 (Naples, 1853), by Roland (pp. 457 and 475) and the so-called "Quatuor Magistri" (pp. 583 and 550). On the classical origins of the concepts of derivation and revulsion, see Marie-Hélène Marganne, "Sur l'origine Hippocratique des concepts de révulsion et de dérivation," *L'Antiquité Classique* 49 (1980): 45–50; it is interesting to note that Hippocrates used *παροχέτευσις* rather than *μεταχέτευσις*, although he used *ἀντίσπασις*.

²¹ Ed. Hermann Seyffert, *Die Flebotomia Richardi Anglici* (Inaug.-Diss., Leipzig, 1924).

setting. The metrical *Liber de flebotomia* assigned by its editor to Johannes de Aquila (ca. 1200), for example, begins with the mnemonic recommendation,

Quis, quid, ubi, quando, quantum, cur, qualiter, unde,
Cum sibi quis minuit, mente, minutor, habe,

and proceeds artificially to analyze the methods of phlebotomy under these separate headings.²² "Henry's" text, on the other hand, gives much more the impression of having been compiled with the needs of a practitioner in mind, for much of it is organized around a list of diseases (among which fevers are given by far the most emphasis). With this text in hand, a physician faced with a particular illness would know immediately from which vein to draw blood—assuming, of course, that all other circumstances were favorable. It is not inconceivable, as we shall see, that this unusually practical orientation recommended the text to its eventual English translator.

For convenience, we have provided, as Appendix B, a Modern English summary of the treatise, indicating where Latin and Middle English versions differ. We must emphasize, however, that a modern version of the text will be misleading. Cognates in contemporary use—*pneumonia* for *peripleumonia*, for example—frequently do not refer to what was meant by the medieval term. Medieval words for illnesses and their causes presuppose a humoral physiology no longer used. Beyond the underlying assumptions of humoral pathology there are other aspects of medieval disease theory implicit in the text that the reader may miss in a modern summary. For instance, the discussion of appropriate days for bleeding for acute fevers that begins on l. 207 refers to the medieval idea that the stages of a febrile illness are *principium*, *augmentum*, *status*, and *declinatio*.

The Latin original which is summarized in Appendix B is widely distributed in manuscript. We have made only a preliminary search, but even so we have identified some thirty copies, attributed to a half-dozen authors under three major variants of incipit. (Most of the manuscripts begin either "Propositum est presentis negotii . . ." or, by inverting the word order, "Presentis negotii . . ."; a few, however, omit the first sentence of the text entirely and begin simply "Minutio alia . . .," and continue in a considerably abbreviated form.) For our purposes, the interest of the Latin text lies to some degree in its content but far more in what it has to show us of the mind of its English translator, and therefore we have not felt it important to attempt an edition that would reproduce the original version of ca. 1200. Instead, we have tried to offer a text close to that from which the translator must have worked, two hundred years later. His own manuscript has not yet been identified, but Madrid, Biblioteca Nacional MS. 3066, fols. 5v–7v (=M)—in which the work is ascribed to Henry of Winchester just as it is in the Cambridge manuscript—is unusually close to

²² Arthur Morgenstern, *Das Aderlassgedicht des Johannes von Aquila* (Inaug.-Diss., Leipzig, 1917), pp. 11–36.

the English translation, and we have thus used this fourteenth-century manuscript as the basis for our Latin version.²³

While we do not intend a full reconstruction of the translator's exemplar, we have approached such a reconstruction in two respects. The text has been edited once before, in the inaugural-dissertation of Rudolf Buer-schaper, from two thirteenth-century manuscripts, one of Brussels and

²³ The following lists summarize and amplify the information provided by Lynn Thorndike and Pearl Kibre, *A Catalogue of Incipits of Mediaeval Scientific Writings in Latin*, 2nd ed. (Cambridge, Mass., 1963), at cols. 875, 1086, 1141-2, 1349. Those citations marked with a star (*) are manuscripts not listed in the *Catalogue*, and those marked with a dagger (†) are entries we have amended.

"Minutio alia . . ."

- * BLas 391, 2r-v
- * BLas 789, 366r-v
- BMh 3542, 111v-113
- † CUG 413, 161v-163
- † CUT 500, 5-6v
- CUT 1081, 15v-16
- * Dickson Wright 1
- * Vb 216, 364v-367v
- Wilhering, Stiftsbibliothek IX, 68,
122-125

"Presentis negotii . . ."

- BMr 12. E. XV, 3-5
- * BN 6988, 88v-90
- * BN 7036, 117-121v
- BN 8654B, 26-28v
- † Brux 14324-43, 242v-244 (=14340)
- † CUG 373, 78-79
- CUSj 78, 30-31
- † Dresden Db 91, 62-63
- Ea F. 289, 44v-45
- MU Q. 692, 158-162
- * Op 11, 27v-32

- * Sankt Pölten, Bischöfl.
Alumnats-Bibliothek
114, 73-74
- * VI 1634, 1-2v
- VI 2426, 139-140

"Propositum est . . ."

- Bern 429, 43-44
- BLr D. 251, 27-29v
- † BMsl 4, 31-34v
- † BN 7121, 28v-36
- CU 671, 121-126
- † CU 938, 207-208v
- Ea F. 288, 25-26
- * Ma 3066, 5v-7v
- † On 171, 74r-v
- PA 1027, 83-86
- * Salzburg, Museum Carolino-
Augusteum 2164, 31-32
- VAp 1165, 94v-96
- VI 5155, 113v-120

"Requirendum est . . ."

- CUpet 178, 40-42v

Perhaps, too, we should mention that the work "Alia fit per metathesim . . ." in BMsl 783B, 57-58v, seems to be based on the same source. Our choice of *M* as the foundation for our edition is based upon an examination of twenty-four of these manuscripts. The manuscript cited by James (above, n. 19)—H. VI.1 in the catalog (A.D. 1389) of Dover Priory—has not yet been identified (cf. N. R. Ker, *Medieval Libraries of Great Britain* [London, 1964], pp. 58-59).

The text beginning "Minutio alia," an abbreviation of "Propositum est/Presentis negotii," was published from a privately owned manuscript (Dickson Wright I) by C. H. Talbot, "A Mediaeval Physician's Vade Mecum," *Jnl. Hist. Med.* 16 (1961): 213-33 (the "Minutio" text is at pp. 223-24). This manuscript, perhaps produced at Oxford ca. 1400, is of additional interest as containing the illustration of a bloodletting man (also reproduced by Talbot). A virtually identical bloodletting man accompanies the same text in MS. Oxford, Ashmole 789, and is reproduced in our Plate II; the two manuscripts also have in common astronomical material, including a table of eclipses for the years 1398-1462. The same combination—astronomical material, "Minutio" text, and illustration—is also found in MS. Cambridge, Trinity College 1081. The "Minutio" text was printed (interspersed with much additional material) in Johannes de Ketham, *Fasciculus medicinae* (Venice, 1491; facsimile ed. Milan, 1924), fol. [3v].

MS. Cambridge, Trinity College 500, is a curious hybrid: fol. 5 appears to contain a faithful transcription of the beginning of the "Minutio" text, but at the beginning of fol. 5v it shifts suddenly to the longer "Propositum" version and seems to continue thus to fol. 6v, where it ends incomplete.

one of Dresden.²⁴ Buerschaper did not always understand what he was editing, and the two manuscripts he used are in any case much further distant from the English version than is *M*, so that his edition cannot be used to study the method of translation. Occasionally, however, Buerschaper's text of the Dresden manuscript (Dresden MS. Db 91, fols. 62–63; =*D*) gives readings that were clearly present in the archetype to which the English translator was obviously so faithful, and we have not hesitated to emend our edition of *M* whenever this was the case. Furthermore, we have relegated to the apparatus certain passages found in *M* but not included in the English translation. (We have not bothered to call attention to copyist's corrections.) The composite result is a text that, for all its artificiality, enhances our understanding of the techniques of fifteenth-century translation while remaining essentially faithful to one particular manuscript version.

It is not unusual to find a number of Latin phlebotomy treatises joined together in a manuscript under one author's name. This was conceivably the case with the exemplar from which the English translator of Gonville and Caius MS. 176/97 worked; although we have not yet found the text from which the last portion of his translation was made, it would presumably have begun "Notandum quod secundum quosdam. . . ." Similarly, the Latin text in *M* continues where our edition stops, going on with the words "Discretio inspectionis sanguinis . . . ," and persists for two more columns before concluding, "explicit tractatus magistri enrici de egri-tudinibus fleubotomandis." This additional material is found attached to "Henry's" treatise in some (e.g., *D*) but by no means all other manuscripts of that work; it was also copied separately in the Middle Ages, and has been edited attached to yet two other phlebotomy texts.²⁵ Because it is apparently an independent work, and was clearly not present in the translator's exemplar, we have not edited it here.

C. LATE MEDIEVAL ENGLISH MEDICINE AND MIDDLE ENGLISH MEDICAL TEXTS

As we turn from the Latin tradition and the Latin text to the Middle English translation "Of Phlebotomie" (ca. 1400) found in Gonville and Caius College MS. 176/97, we must have in mind the general picture of English medicine of the period 1377–1461. It is difficult to arrive at a clear understanding of medical study and medical practice in England during the reigns of Richard II and the Lancastrian kings. In addition to Talbot's²⁶

²⁴ See above, n. 18.

²⁵ Romuald Czarnecki, *Ein Aderlasstraktat angeblich des Roger von Salerno* (Inaug.-Diss., Leipzig, 1919), pp. 12–15; Seyfert, *Richardi Anglici*, pp. XIII–XV.

²⁶ Charles H. Talbot, *Medicine in Medieval England* (London, 1967), provides an overview, but its use is limited for the serious student because it lacks documentation. On earlier periods, see Stanley Rubin, *Medieval English Medicine* (New York, 1974), and Edward J. Kealey, *Medieval Medicus: A Social History of Anglo-Norman Medicine* (Baltimore, 1981), and for the following era, see Margaret Pelling and Charles Webster, "Medical Practitioners," pp. 165–235 in *Health, Medicine and Mortality in the Sixteenth Century*, ed. Charles Webster (Cambridge, 1979).

general portrait, there are more specific studies,²⁷ but much remains to be learned about the medical course of study at Oxford and Cambridge and about the training and practice of English physicians,²⁸ surgeons, barber-surgeons, and empiric practitioners in the late fourteenth century and the first half of the fifteenth. Leaving aside the question of foreign physicians,²⁹ it is necessary to consider *vis-à-vis* "Of Phlebotomie" both the world of university medicine, the likeliest conduit for the appearance of this text in England, and the world of the barber-surgeon for whom this treatise may have been Englished, a practitioner for whom medicine was a craft rather than an art or a science.

As the discussion of the Latin tradition in Section B makes clear, "Of Phlebotomie" is not a simple how-to manual for bloodletting. As part of the tradition of theoretical school medicine, it is organized in a systematic way, setting forth the general principles of metacentesis, antispasis, and apoforesis, and the factors of custom, time, age, and strength, before organizing in a logical fashion disorders to be remedied by bloodletting. It draws on respected sources, the *Megatechni* and *Viaticum* of Constantine and the *Aphorisms* of Hippocrates,³⁰ and its attribution to various academic physicians—including in the English and two Latin codices the Montpellier master Henry of Winchester—seems to place its origin in the world of an early thirteenth-century medical faculty. These academic origins of the text necessitate an examination of university medicine in Ricardian and Lancastrian England.

What is striking about the position of medicine in the two English universities is the degree to which it differed from that of Continental universities.³¹ These differences can be seen in a number of respects, and a telling factor seems to have been that Oxford and Cambridge were not populous cities like the European cities Bologna, Paris, and Montpellier, at the time their medical faculties were strong. Rather than being based

²⁷ See R. Theodore Beck, *The Cutting Edge: History of the Surgeons of London* (London, 1974); Huling E. Ussery, *Chaucer's Physician: Medicine and Literature in Fourteenth-Century England*, Tulane Studies in English 19 (New Orleans, 1971); D'Arcy Power, "English Medicine and Surgery in the Fourteenth Century," in *Selected Writings* (Oxford, 1931), pp. 29–47; George E. Gask, "The Medical Staff of King Edward the Third," and "The Medical Services of Henry the Fifth's Campaign of the Somme in 1415," in *Essays in the History of Medicine* (London, 1950), pp. 77–93, 94–102; and Madeleine Pelner Cosman, "Medieval Malpractice," *Bul. N.Y. Acad. of Med.* 2nd ser., 49 (1973): 22–47. John Riddle's "Theory and Practice in Medieval Medicine," *Viator* 5 (1974): 157–84, argues that, at least as regards pharmacology, the impact of theory on practice was a "retrogressive feature." A useful guide to information on particular figures is Charles H. Talbot and E. A. Hammond, *The Medical Practitioners in Medieval England: A Biographical Register* (London, 1965).

²⁸ On some of the larger issues of the profession, see John Alford, "Medicine in the Middle Ages: The Theory of a Profession," *Centennial Review* 23 (1979): 377–96.

²⁹ On foreign physicians employed at the English Court in the fifteenth century, see Talbot, *Medicine*, pp. 204–05, and Beck, *passim*. Twenty-six of the eighty physicians between 1350 and 1413 identified by Ussery (*Chaucer's Physician*, pp. 40–57) were foreigners.

³⁰ See the discussion above, p. 7.

³¹ This discussion of English university medicine draws heavily on a number of studies by Vern L. Bullough. Of particular importance are "Medical Study at Mediaeval Oxford," *Speculum* 36 (1961): 600–12, and "The Mediaeval Medical School at Cambridge," *Mediaeval Studies* 24 (1962): 161–68. See also Talbot, *Medicine*, pp. 68–71.

in London, the center of power and wealth, the British universities were in small towns; Oxford had a population of scarcely over 2,000 and Cambridge about 3,000 in 1377, a time when London numbered some 35,000 inhabitants.³² Consequently, one important difference in the civic role of an English faculty of medicine was that it was not in a position to regulate and license the medical practice of a large metropolitan area as were the faculties of Continental cities.³³

At least partly as a result of this isolation from urban centers, English medical enrollment seems always to have been comparatively small, and the English university was characterized by the anomalous situation of medicine being a minor or ancillary program of study. The faculty of medicine at Oxford was subordinate to the faculty of arts, and at Cambridge a student could study arts and medicine simultaneously.³⁴ These circumstances produced what seems to have been two peculiarly English phenomena: a "minor" in medicine for students whose primary studies were in other faculties;³⁵ and the practice of an individual taking several advanced degrees, of which the D.M. was one.³⁶ Simon Bredon of Merton College is a well-known instance of this practice in the later fourteenth century. He took an M.A. and a D.M. and then studied theology for five more years. He did practice medicine, but his library reflects broad interests, and of the fourteen works he is known to have written, only one deals with medicine.³⁷

Because many of these dual or multiple degrees link medicine and theology, and because a theology student could minor in medicine, another characteristic of English university-trained physicians is not surprising: the majority of them seem to have been ordained. Of the eighty fourteenth-century physicians studied by Ussery, forty-one were secular clerics and

³² Bullough, "Population and the Study and Practice of Medieval Medicine," *Bul. Hist. Med.* 36 (1962): 62–69.

³³ In the town of Oxford medical practice was restricted in 1400 to those licensed by the faculty of medicine. See *Munimenta academica*, ed. Henry Anstey, Rolls Series 50 (London, 1868), vol. 1: 236–37. A useful survey of the role of the faculty of medicine at Paris in regulating and licensing medical practitioners is to be found in Pearl Kibre, "The Faculty of Medicine at Paris, Charlatanism, and Unlicensed Medical Practices in the Later Middle Ages," *Bul. Hist. Med.* 27 (1953): 1–20. See also Bullough, "Achievement, Professionalization and the Universities," in *The Universities in the Late Middle Ages*, ed. Jozef Ijsewijn and Jacques Paquet (Leuven, 1978), p. 497.

³⁴ Bullough, "Population," p. 69; *The Development of Medicine as a Profession* (New York, 1966), pp. 80–81; and "Medical Study," pp. 603–04.

³⁵ Bullough, "Medical Study," pp. 603–604; the number of students studying medicine exclusively or primarily seems to have been restricted. For example, in 1400, New College allowed only two of seventy students to study medicine (p. 611). See also "The . . . School at Cambridge," p. 167.

³⁶ Bullough, "Medical Study," pp. 603–04, lists seven Oxford students who took the D.M. as one of two or more advanced degrees; indeed a John Talbot earned three doctorates.

³⁷ See Talbot, "Simon Bredon (c. 1300–1372): Physician, Mathematician and Astronomer," *Brit. Jnl. for the Hist. of Sci.* 1 (1962): 19–30; Talbot, *Medicine*, p. 198, and Bullough, "Medical Study," pp. 603, 607–608. Bredon's will, in which he leaves a considerable number of books to Merton College, survives; more than a score of volumes named contain a variety of medical texts and shed light on the medical works studied at Oxford in the third quarter of the fourteenth century. The will was published by F. M. Powicke, *The Medieval Books of Merton College* (Oxford, 1931), pp. 82–86.

seven were regular, and Ussery posits that the percentage was in fact considerably higher.³⁸ It was not uncommon for a physician to be rewarded by a monarch or nobleman with an ecclesiastical benefice or benefices, although there is no evidence of surgeons (who lacked university degrees) receiving payment in the form of ecclesiastical office.³⁹

A final respect in which medical study at Cambridge and Oxford differed from Continental study in the later Middle Ages is not unexpected, given the remote locations, the limited enrollment, and the low prestige of English faculties of medicine: the curriculum was conservative, even reactionary. It was essentially derivative of the Paris curriculum, and there is no reason to think that any contributions to the development of theoretical medicine came from Oxford or Cambridge.⁴⁰ To be sure, advances were made in surgery in England—as, for example, by John Arderne—but university medicine was another matter. Accordingly, “Of Phlebotomie,” which represents thirteenth-century medicine with its emphases on Constantine rather than Galen, might well not have been considered out-of-date in English universities at the end of the fourteenth century, or even in the fifteenth. Among the medical writings left to Oxford by Humphrey, Duke of Gloucester (d. 1447), only one was composed as late as the fourteenth century; the rest were twelfth and thirteenth-century works.⁴¹ In short, this technical phlebotomy may well be quite typical of the concerns of late medieval English university medicine, an observation confirmed by an analysis of the other texts in Gonville and Caius MS. 176/97, a matter to be discussed later.

It seems, then, that the world of university medical study is the probable source of the Latin phlebotomy attributed to Henry of Winchester and the vehicle for its transmission to England. However, it is necessary to look beyond the world of academic medicine to consider the reader/user of our text, both because “Of Phlebotomie” was Englished—a superfluous exercise in the case of the university-trained physician—and also because it is only one of several in an intelligently compiled anthology of Middle English scientific and medical writings. Furthermore, one of the other texts, an academic medical compendium of nearly two hundred pages, may identify the intended audience. While a full treatment of the contents of Gonville and Caius MS. 176/97 belongs properly in the subsequent discussion of Middle English medical writings, a passage occurring on p. 39 of the codex near the beginning of the long compendium should be considered at this point:

³⁸ Ussery, *Chaucer's Physician*, pp. 29–30.

³⁹ E. A. Hammond, “Incomes of Medieval English Doctors,” *Jnl. Hist. Med.* 15 (1960): 166, 169.

⁴⁰ Talbot, *Medicine*, pp. 66–69.

⁴¹ The fourteenth-century authority was Bernard of Gordon; see Bullough, “Duke Humphrey and His Medical Collections,” *Renaissance News* 14 (1961): 87–91. On the other hand, a remarkable booklist that includes a number of nearly contemporary university medical writings dates from the 1370s. It is “The Catalogue of the Library of the Augustinian Friars at York,” ed. M. R. James, in *Fasciculus I.W. Clark dictatus* (Cambridge, 1909), pp. 2–96.

And þerefore y treste yn god þ^t ys lorde of alle wisdom to write a fewe commune & profitable jewlys, nouȝt to⁴² clerkys, but to myn dere gossip thomas plawdon, citiseyn & barbour of london, I austyn schal write sum del of theorike & sum del of pratike þorue þe wiche ȝe schulle þe betir entre into þe worchyng of fisyk in tyme of lakkyng of wise fysicians þat ȝe may knowen whan materie of maledies ben digeste & whan nouȝt digeste, & þerefore y schal write to þe þis scrorte doctryne of þynges natural & unnatural & of summe þynges aȝenste kynde.

This passage tells us that the compendium was translated in an era lacking wise physicians, by someone named Austin, for a London barber-surgeon, Thomas Plawdon. Our earlier discussion of the limited medical study available at Oxford and Cambridge would seem to corroborate Austin's observations concerning the "lakkyng of wise fysicians,"⁴³ and it may shed some light on the nature of Austin's training. Austin does not claim to be a physician, but the scholastic vocabulary of other sections of the codex⁴⁴ and the academic nature of the medical texts suggest university training. Inasmuch as Austin could have studied medicine as a "minor" without taking a doctorate, it may well be that Austin is himself a clerk—a cleric or man of education⁴⁵—albeit in this instance not writing to his fellows.

Although the passage leaves the training and identity of Austin to conjecture, it provides a valuable clue as to the date and more precise localization of the barber-surgeon, who may also have been the intended reader/user of the phlebotomy at the beginning of the codex. Thomas Plawdon is probably to be identified with Thomas Plouden, London citizen and barber-surgeon of the parish of All Hallows the Great, who died in 1413.⁴⁶ Regrettably, however, the evidence concerning the training, status, and

⁴² A word of three or four letters followed to and preceded *clerkys*, but it has been erased and is not now discernible.

⁴³ Contemporary observations in Latin by John of Mirfeld on the inferiority of physicians may draw on antique writings and suggest that such opening statements were conventional. See pp. 48–50 of the "Proemium" to the *Breviarium Bartholomei* in *Johannes de Mirfeld of St. Bartholomew's, Smithfield: His Life and Works*, ed. and trans. Percival Horton-Smith Hartley and Harold R. Aldridge (Cambridge, 1936). This volume contains only a portion of the complete *Breviarium Bartholomei*. A later copy of the Gonville and Caius prologue not citing Thomas Plawdon is to be found in Trinity College, Cambridge, MS. R. 14/52, fols. 159–160.

⁴⁴ Particularly the *quaestiones et responsiones* on pp. 16–20.

⁴⁵ See the *Middle English Dictionary*, ed. Hans Kurath and Sherman Kuhn (Ann Arbor, 1954–), s.v. *clerk*. Of the three non-onomastic usages—1. a member of the clergy; 2. one who is educated, or a university student; 3. a secretary or amanuensis—the third does not seem a likely meaning here. We do not have enough information, however, to know whether Austin intends 'clerics' or 'university students' when he uses *clerkys*. The erasure before the word remains perplexing.

⁴⁶ Neither Austin nor Thomas Plawdon is listed in Talbot and Hammond, *Medical Practitioners*, but the nuncupative will of Thomas Plouden survives; see *Index to Testamentary Records in the Archdeaconry Court of London*, ed. Marc Fitch, 1 (1363)–1649 (London, 1979): 298. The will itself is very brief, merely giving burial instructions, charging Plouden's wife Margaret with the responsibilities of executrix, and naming as witnesses the following: John Brampton, William Archall, and John Parker. Plawdon/Plouden is not the only medical figure who can be linked to the parish of All Hallows the Great; Beck prints documents showing that the fourteenth-century surgeon Adam Rous also owned property in that parish (p. 52) as did Thomas Morstede in the following century (p. 93).

numbers of fourteenth- and fifteenth-century English surgeons and barber-surgeons like Plawdon/Plouden is, if anything, more intractable than that concerning university-trained physicians.⁴⁷ Certainly an interest in surgery had long characterized the English. Gilbertus Anglicus and John of Gaddesden are two instances; the latter practiced surgery, wrote for surgeons, and sold remedies to barbers.⁴⁸ The major contributions of England to the healing arts were in the later fourteenth century the writings of John Arderne who described himself as "chirurgus inter medicos,"⁴⁹ and in the fifteenth century the treatise attributed to Thomas Morstede, a work not of the importance of Arderne's.⁵⁰ The particular interest in surgery in England is underscored by noting that many of the more learned and systematic of Middle English medical texts are translations of the works on surgery of Guy de Chauliac, Henry of Mondeville, William of Saliceto, and Lanfranc; at least eight manuscripts survive of the Middle English Lanfranc.⁵¹

Surgeons not only wore long robes like physicians, they were in all probability expected to be able to read Latin, in London as well as in Paris, and some of their lengthy period of apprenticeship may have involved attending lectures.⁵² In England in the early fifteenth century surgeons and physicians seemed to have been aligned with one another perhaps because both groups were weak in relation to the politically powerful

⁴⁷ An analysis of the relative social status of physicians, surgeons, and barber-surgeons, based primarily on Paris information, is Bullough, "Status and Medieval Medicine," *Jnl. of Health and Human Behavior* 2 (1961): 204–10. On the differing training and dress of surgeons and barber-surgeons, see Bullough, "Training of the Nonuniversity-Educated Medical Practitioners of the Later Middle Ages," *Jnl. Hist. Med.* 14 (1959): 446–58, a helpful article, but one that may make the distinctions between the two crafts more clear-cut than it actually was. Anyone concerned with surgeons and/or barber-surgeons in England should consult the earliest surviving records of the two crafts assembled in the following volumes: *The Annals of the Barber-Surgeons of London, Compiled from Their Records and Other Sources*, by Sidney Young (London, 1890); and *Memorials of the Craft of Surgery in England*, from materials compiled by John Flint South, ed. D'Arcy Power (London, 1886). These records must be used with care, however. The disposition of petitions recorded in them is not always clear, and any given statistic may be misleading. (The larger picture is dealt with by Beck, albeit with a bias against the barber-surgeons.) For example, Bullough, "Training," p. 447, emphasized that in 1435 there were only seventeen members of the Surgeons' Company in London (see *Memorials*, pp. 59–69). We must note, however, that Thomas Morstede was authorized to impress twelve surgeons for service in France in 1415 (*Memorials*, pp. 46–49, and Gask, "The Medical Services of Henry the Fifth's Campaign of the Somme," pp. 94–102). A useful description from later in the fifteenth century of the differing duties and payments of the doctor of physic and the master surgeon attending the king can be found in the *Liber Niger Domus Edward IV*, reprinted pp. 78–79 in Gask, "The Medical Staff of King Edward the Third." The life records of surgeons and barber-surgeons printed at the end of each chapter in Beck are also very useful. On fees, see also Hammond, "Incomes," and Alford, "Medicine."

⁴⁸ Talbot, *Medicine*, pp. 107–15, 120.

⁴⁹ *Memorials*, p. 30.

⁵⁰ Beck argues, pp. 81–84, that a text sometimes called "Mesue Englished" in Brit. Lib. Harley MS. 1736 is by Morstede, and he prints a substantial portion of the "Fair Book of Surgery" as Ch. V, pp. 105–119 of *The Cutting Edge*. We do not find the arguments for Morstede's authorship to be convincing ones.

⁵¹ Rosell Hope Robbins, "Medical Manuscripts in Middle English," *Speculum* 45 (1970): 406.

⁵² Bullough, "Training," p. 448; Kibre, "Faculty of Medicine," p. 18.

guild of barber-surgeons. In 1421–23 a group made up of both physicians and surgeons unsuccessfully petitioned the king but successfully petitioned the Lord Mayor and aldermen of London to establish a “conjoint” college for philosophical discussions, licensing, regulating fees, and the monitoring of medical practice by two supervisors of physic, two masters of surgery, and a rector who was a doctor of medicine. The college seems, however, to have been short-lived.⁵³

Although some records survive, we know even less about the barber-surgeons of London than we do concerning the surgeons. It is clear, however, that animosity between the surgeons and barber-surgeons was not uncommon. In John Arderne’s *Treatise of Fistula in Ano*, the surgeon cautions against letting a certain use of the lancet be observed, lest, in the words of the Middle English version, “if barbouris knowe þis doying þai would vsurpe þis cure, appropriand it to þamself vnto vnworschip and noȝt litel harme of maystreȝ.”⁵⁴ So too, many fourteenth- and fifteenth-century records suggest tension between the fraternity of surgeons on one hand and that of the barber-surgeons on the other. The barber-surgeons’ guild was divided into *magistri barbitonsorum* and masters of barbering who exercised the faculty of surgery. It was the older and larger guild, the first of the two to be given a grant of arms and a royal charter,⁵⁵ and—it would appear from successes in overruling the repeated attempts of surgeons to supervise them—politically powerful. In 1409–10, the barbers’ ordinance of 1376 that granted the privileges of shaving, cutting, bleeding, and surgery with freedom from scrutiny by any other craft was reconfirmed.⁵⁶ Yet another example of the barbers’ influence was the guild response to the establishment, mentioned above, of the conjoint college of physicians and surgeons founded in 1424, a date very close to that of Gonville and Caius MS. 176/97. That response, a writ in English like the Cambridge manuscript, is the first record of the craft in the vernacular. It confirms the surgical rights of the craft and the right to regulate them in spite of charges brought by the rector of medicine, who was supervisor—with the masters of surgery and those of physic—of the conjoint college.⁵⁷

Barber-surgeons served apprenticeships of from four to seven years in England and may have received some formal instruction. In Paris on occasion barbers were provided with lectures on medicine by the faculty of medicine. There may have been instruction for barbers in London, at least in the form of lectures on anatomy at the end of the fifteenth century.⁵⁸

⁵³ *Memorials*, pp. 52–59, 299–306. On the situation in Paris, see Kibre, “Faculty of Medicine,” pp. 14–19, and Bullough, “Status,” p. 208.

⁵⁴ *Treatises of Fistula in Ano*, ed. D’Arcy Power, EETS o.s. 139 (London, 1910), p. 71.

⁵⁵ Guild records for the barbers survive from 1308; they were awarded a grant of arms in 1451 and a royal charter in 1462. Guild records survive for surgeons from 1368, and the guild was granted arms in 1492. See *Annals and Memorials*.

⁵⁶ *Annals*, p. 39; *Memorials*, p. 21.

⁵⁷ *Annals*, pp. 43–47.

⁵⁸ Bullough, “Training,” pp. 450–57, and Kibre, “Faculty of Medicine,” p. 19. A number of the wills of barber-surgeons printed by Beck make bequests of books; see pp. 161, 163, 164, 166.

In any event, it would be wrong to regard barbers as illiterate or as interested only in the imitative learning of craft skills. In addition to Gonville and Caius MS. 176/97 and the bequests of books in the wills of barber-surgeons, another manuscript owned by a barber in the fifteenth century can be cited; it contained, as well as the Middle English *Macer*, Latin and French texts, including astrological and gynecological ones and Galen's *De sectis*.⁵⁹ Bullough observes that as barber-surgeons became more numerous and more powerful they began to adapt the learned tradition for their own uses.⁶⁰ A fourteenth-century translation into French of the *Aphorisms of Hippocrates* for a papal barber-surgeon at Avignon⁶¹ seems to be a Continental example of this process, and the Middle English "Of Phlebotomie" may well be another.

When we consider the body of Middle English medical writings, the most important point that needs to be made is that we do not know what there is or how much there is. The body of Middle English prose is large and uncharted;⁶² there are thousands of manuscripts in British, American, Continental European, and Japanese libraries, and access to them via conventional manuscript catalogs is sometimes difficult.⁶³ Pathfinding work with medieval medical manuscripts in all languages in British libraries was done by Dorothea Waley Singer in the early part of the twentieth century. The raw material for her survey⁶⁴ can be consulted at the British Library or on microfilm. There are difficulties in using this material, and it is by

⁵⁹ Talbot, *Medicine*, p. 187. The manuscript is Brit. Lib. MS. Sloane 5; see Robbins, "Medical Manuscripts," p. 410.

⁶⁰ Bullough, "Training," p. 458. For a similar situation in ancient Greece where craftsmen, leeches, began to study the learning of physicians (philosophy), see Owsei Temkin, "Greek Medicine as Science and Craft," *Isis* 44 (1953): 213–25; rpt. *The Double Face of Janus* (Baltimore, 1977), pp. 137–53.

⁶¹ Germaine Lafeuille, *Les Commentaires de Martin de Saint-Gille sur les Amphorismes Ypocras* (Geneva, 1964), p. 7.

⁶² For verse there is *The Index of Middle English Verse* by Carleton Brown and Rossell Hope Robbins (New York, 1943), and the *Supplement* by Rossell Hope Robbins and John L. Cutler (Lexington, Kentucky, 1965), hereafter cited as *IMEV* and *IMEV Suppl.*

To be sure, it is somewhat artificial to consider Middle English medical writing apart from Latin and Anglo-Norman texts, for it appears that is more common for medical manuscripts containing Middle English to be polyglot than single-language. For instance, of the seven manuscripts containing Middle English medical texts in Harvard University libraries (Law Library MSS. 4, 10, 61; Houghton Library MS. lat. 235; Countway Medical Library MSS. 7, 18, 19), not one is an exclusively English-language codex. Gonville and Caius MS. 84/166 contains both Latin and English texts, and another typical example is the manuscript owned by Irwin J. Pincus, M.D., of Los Angeles: it is comprised of Latin, Middle English, and mixed Latin-Middle English texts, some of which have Anglo-Norman glosses. On Anglo-Norman medical texts, see Johan Vising, *Anglo-Norman Language and Literature* (London, 1923), especially Nos. 313–320.

⁶³ Work which will occupy years, perhaps even decades, is now underway on the much-needed *Index of Middle English Prose*. See Robbins, "Opening Remarks," pp. 3–21; A. S. G. Edwards, "Towards an *Index of Middle English Prose*," pp. 23–41; and R. E. Lewis, "Editorial Technique in the *Index of Middle English Prose*," pp. 43–64; in *Middle English Prose: Essays on Bibliographical Problems*, ed. A. S. G. Edwards and Derek Pearsall (New York, 1981).

⁶⁴ For a brief summary of Mrs. Singer's survey, see her "Survey of Medical Manuscripts in the British Isles Dating from before the Sixteenth Century," *Proc. Royal Soc. Med., Hist. of Med. Section*, 12 (1918–19): 96–107.

no means complete,⁶⁵ but the estimate of 1032 Middle English medical manuscripts from the thirteenth through the fifteenth centuries provides a sense of the scope. Subsequent work was done by H. S. Bennett on the later period,⁶⁶ but it is because of Rossell Hope Robbins's pioneering efforts that we have a map of the outlines of what remains largely uncharted territory. In "Medical Manuscripts in Middle English," Robbins (1970) surveyed the medical texts in more than 350 manuscripts,⁶⁷ but he has subsequently suggested that the figure "is surely less than a quarter of the estimated total."⁶⁸ Still, this fourth is likely representative and warrants some provisional generalizations about the kinds of medical writing found in Middle English.

There are a number of ways one can categorize Middle English medical writings, and each has its limitations.⁶⁹ There is first the distinction between verse and prose. Verse serves a mnemonic function enabling the memorizer to recall the virtues of herbs,⁷⁰ or a list of bloodletting veins,⁷¹ or a dietary.⁷² However, in the whole body of Middle English medical writings verse does not bulk large, and if one looks only at prose, one must yet search for a system of classification. Robbins chose to classify texts by the subject matter—diagnosis, prognosis, or therapeutics,⁷³ the third category the largest by far. While these categories have use, they are somewhat anachronistic—as is the division between surgery and medicine⁷⁴—and when

⁶⁵ See two articles by Robbins, "A Note on the Singer Survey of Medical Manuscripts in the British Isles," *Chaucer Review* 4 (1970): 66–70; and "The Physician's Authorities," pp. 335–41 in *Studies in Language and Literature in Honour of Margaret Schlauch*, ed. Mieczysław Brahmner et al., (Warsaw, 1966).

⁶⁶ "Science and Information in English Writings of the Fifteenth Century," *Mod. Lang. Rev.* 39 (1944): 1–8.

⁶⁷ *Speculum* 45 (1970): 393–415.

⁶⁸ "Foreword," to Beryl Rowland, *Medieval Woman's Guide to Health* (Kent, Ohio, 1981), p. xii.

⁶⁹ On the matter of categories in *Fachliteratur*, see William C. Crossgrove, "The Forms of Medieval Technical Literature: Some Suggestions for Further Work," *Jahrbuch für Internationale Germanistik* 3 (1971): 13–21. Several useful studies addressing issues of taxonomy, terminology, and editing problems are to be found in *Studies on Medieval Fachliteratur*, ed. William Eamon, *Scripta* 6 (Brussels, 1982).

⁷⁰ For one version of the verse "virtues of herbs," see *IMEV Suppl.* 417.8, and for another, Arne Zettersten's edition, *The Virtues of Herbs in the Loscombe Manuscript*, *Acta Universitatis Lundensis*, Sec. I, *Theologica Juridica Humaniora* 5 (Lund, 1976).

⁷¹ The poem in couplets, "Veynes Per be XXXth and two," is *IMEV* and *IMEV Suppl.* 3848. The *Suppl.* lists twenty-seven manuscripts, four of which have been printed. Perhaps the best known of the printed versions is the one based on Nat. Lib. of Medicine MS. 4, ff. 16r–17r; see Claudius F. Mayer, "A Medieval English Leechbook and its 14th Century Poem on Bloodletting," *Bul. Hist. Med.* 7 (1939): 381–91. Additional versions are to be found in Linne R. Mooney, "Practical Didactic Works in Middle English" (Ph.D. diss., University of Toronto, 1981).

⁷² John Lydgate's "Dietary," also found in Nat. Lib. of Medicine MS. 4, fols. 64r–64v, was quite popular; *IMEV* and *IMEV Suppl.* list 51 manuscripts and three early printed editions, as well as numerous modern editions, for 824, a poem of ten eight-line stanzas. See also R. H. Bower, "A Middle English Mnemonic Plague Tract," *Southern Folklore Quarterly* 20 (1956): 118–25.

⁷³ "Medical Manuscripts," p. 395.

⁷⁴ Bennett, "Science," uses a surgery/medicine division (pp. 2–5).

one addresses bloodletting, which can be used for diagnosis or prognostics as well as for treating specific disorders, the problems with such a classification become apparent. Furthermore, learned compendia with continuous chapter numbering that are intended to be taken as single works may well contain prognostic, diagnostic, and therapeutic elements; such is the case of the long compendium at the end of Gonville and Caius MS. 176/97.

Yet another approach to the body of vernacular English medicine before 1500 is to classify it in terms of the intended audience—lay, highly trained physician or surgeon, village empiric. Indeed this system works well for the sixteenth century,⁷⁵ and one can readily call to mind Middle English texts for the layman such as the *Liber de diversis medicinis* in the Thornton Miscellany⁷⁶ or the medical sections in the *Commonplace Book of Robert Reynes*.⁷⁷ Similarly we know of Middle English manuscripts written for, or at least owned by, highly trained physicians⁷⁸ and of the Middle English versions of learned surgical treatises clearly not for the use of the village healer.⁷⁹ In the intermediate range are of course the texts written for and/or by the local leeches, empirics like John Crophill.⁸⁰ This analysis by audience is an appealing one, but it can be limited by the information provided by a particular codex. Simply put, there are times when we do not have enough information to posit the reader/user of a given book, particularly if a manuscript seems to have been commercially produced.⁸¹ Furthermore, the information, when it is present, may surprise us. One would not consider our academic phlebotomy to be a work Englished for

⁷⁵ Paul Slack, "Mirrors of Health and Treasures of Poor Men: The Uses of the Vernacular Medical Literature of Tudor England," pp. 237–73 of *Health, Medicine and Mortality in the Sixteenth Century*.

⁷⁶ Ed. Margaret S. Ogden, EETS o.s. 207 (rev. rpt. London, 1969).

⁷⁷ Ed. Cameron Louis, Garland Medieval Texts I (New York, 1980).

⁷⁸ Robbins, "Medical Manuscripts," lists six manuscripts, some containing French and/or Latin as well as English, that were in the possession of graduate physicians (p. 408). Indeed, the text edited as Appendix A is from Gonville and Caius MS. 84/166, a codex that may have belonged to the physician John Argentine, Provost of King's College, Cambridge. See Dennis E. Rhodes, "Provost Argentine of King's and His Books," *Trans. Cambridge Bibl. Soc.* 2 (1956): 212.

⁷⁹ Bennett, "Science," p. 4, and Robbins, "Medical Manuscripts," p. 406, name Middle English translations of the surgeries of Lanfranc, William of Saliceto, John of St. Paul, John Arderne, Guy de Chauliac, and Roger of Salerno. In addition to these listings, Middle English versions of the surgery of Henry of Mondeville are to be found in Cambridge, Peterhouse MS. 118, and London, Wellcome MS. 564.

⁸⁰ The famous Crophill holograph, Brit. Lib. Harley MS. 1735 (ff. 28r–52v), is discussed by Ernest William Talbot, "The Notebook of a Fifteenth-Century Practicing Physician," *Texas Studies in English* 21 (1942): 5–30; and Talbot, *Medicine*, pp. 190–91. The manuscript contains vernacular texts in prose and verse on the complexions and elements, bloodletting, uroscopy, diet, days for treatment, and the like. It also contains miscellaneous recipes and the personal notes on Crophill's medical practice. Crophill was a rural empiric practitioner whose medical practice was incidental to his duties as a bailiff. See James K. Mustain, "A Rural Medical Practitioner in Fifteenth-Century England," *Bul. Hist. Med.* 46 (1972): 469–76.

⁸¹ Robbins, "Medical Manuscripts," asserts that "it appears very likely that collections of medical recipes were written in commercial scriptoria for speculative sale" (p. 413).

a barber-surgeon were it not for the clue at the end of the prologue to the long academic compendium in the same manuscript.

There is still another way to classify Middle English prose medical texts that may be free of some of the limitations of other systems (although it has its own limitations). This analysis classifies texts on the basis of their origin—academic medicine or popular remedybook—rather than of a hypothetical audience. This approach may be closer than others to the medieval understanding of the texts, but it is to a large degree a response to the differing editorial problems posed by the two kinds of text. In short, do we have with any given text an attempt to adhere to a technical learned source on one hand, or do we have the more open, adaptable remedybook in the tradition of the *receptaria* on the other? These two points of classification are, admittedly, the poles of a continuum, and some kinds of texts—uroscopic, for example—may well occupy an intermediate position. Nonetheless these categories are useful because one approaches, edits, analyzes the texts in one category in a way different from that used with the other sort.⁸²

Remedybooks comprise the older and the larger category. They were the primary medical texts of the early Middle Ages, and there are a number of Old English instances that survive from before the Norman Conquest.⁸³ Middle English works from before the latter part of the fourteenth century all fall into this category.⁸⁴ The textual traditions of remedybooks are difficult to trace because their very nature is that of adaptation and accretion.⁸⁵ These compendia sometimes contain elements of zodiacal computation of prognosis; they often contain uroscopy texts for diagnosis, but they are made up mostly of treatment for ailments—or, more accurately, for symptoms—by minor surgical procedures, non-theoretical phlebotomy, cupping, dietary, prayers, charms, ritual action, and, of course, “prescriptions.” These recipes may be simples or compounded from a variety of

⁸² See Linda E. Voigts, “Editing Middle English Medical Texts,” in *Editing Texts in the History of Science and Medicine*, ed. Trevor H. Levere (New York, 1982).

⁸³ On the use of these texts in the early Middle Ages, see John Riddle, “Theory and Practice in Medieval Medicine.” For a discussion of pre-Conquest texts, see Linda E. Voigts, “Anglo-Saxon Plant Remedies and the Anglo-Saxons,” *Isis* 70 (1979): 250–68.

⁸⁴ John E. Wells, *A Manual of the Writings in Middle English 1050–1400* (New Haven, 1916), pp. 428–30. While this listing is incomplete, it makes clear the remedybook nature of most medical manuscripts before 1400; only two entries are not remedybooks, and they are the Middle English Lanfranc and John Arderne, both of which were translated near the end of the fourteenth century. Talbot, *Medicine*, p. 188, associates many of these books with the friars. Indeed, remedybooks may well have been carried by friars, but the numbers of vernacular remedybooks are too considerable to restrict their use and distribution to the mendicant orders.

⁸⁵ A late fourteenth-century English example of a Latin remedybook was compiled by John of Mirfeld, a clergyman at St. Bartholomew’s hospital who claimed no medical training. Titled the *Breviarium Bartholomei*, it is a compendious work organized by general diseases and then disorders from head to toe. See the request that the reader/user improve the book in the “Proemium,” p. 48 of the partial edition, *Johannes de Mirfeld* (n. 43). This compendium is mentioned by Luke Demaitre in his discussion of Latin practical compendia written by university teachers, “Scholasticism in Compendia of Practical Medicine, 1250–1450,” *Manuscripta* 10 (1976): 81–95, but it surely falls in the more general category.

ingredients—animal, lapidary, or, most often, vegetable. The remedies are frequently organized from head to foot, or, in the case of herbal simples, by the plant. A large group derives from Macer's *De virtutibus herbarum*;⁸⁶ others may derive from such works as the Salernitan *Antidotarium Nicolai*.⁸⁷ The variable nature of this sort of text cannot be too strongly emphasized. Henry Hargreaves's comparison of the variants of a recipe "for clensyng of þe hede," is particularly valuable in this regard. He presents and discusses variants of that same recipe from forty Middle English manuscripts; he also compares twenty-five recipes for headache and three Middle English compound recipes with seventeenth-century versions.⁸⁸

These variable remedybooks bulk large in the body of Middle English medical writings and they have received a surprising amount of editorial attention. Bennett noted forty manuscripts devoted to Middle English remedies alone in the Sloane Collection at the British Library,⁸⁹ and certainly the largest group of manuscripts cataloged by Robbins falls in this category.⁹⁰ In his search for manuscripts containing the Middle English prose "Virtues of Herbs," Henry Hargreaves worked with more than 200 remedybooks.⁹¹ Perhaps because this category is the larger, several of these remedybooks have been edited and someone with a limited acquaintance with Middle English medicine is likely to know one or more of the texts edited by Dawson, Ogden, Schöffler, Henslow, Heinrich, or Müller.⁹² Other

⁸⁶ The 2,269 hexameter-line Latin poem variously titled *De virtutibus herbarum* or *De viribus herbarum* and attributed to "Macer" was probably written by Odo of Meung in the first half of the eleventh century. See Macer *Florus de viribus herbarum*, ed. Ludwig Choulant (Leipzig, 1832); Max Manitius, *Geschichte der lateinischen Literatur des Mittelalters, Zweiter Teil* (Munich, 1911–31), 2: 539–47; and Bruce P. Flood, Jr., "The Medieval Herbal Tradition of Macer Floridus," *Pharmacy in History* 18 (1976): 62–66. For an instance of the flexible nature of this sort of text, compare the Middle English prose version that is relatively close to the Latin, *A Middle English Translation of Macer Floridus de viribus herbarum*, ed. Gösta Frisk (Uppsala, 1949), with a prose version more loosely based on the Latin, "Here Men May Se the Vertues off Herbes," ed. Pol Grymonprez, *Scripta* 3 (Brussels, 1981); rev. Henry Hargreaves, *Speculum* 57 (1982): 684. On the transmutations of the Middle English prose version, see Hargreaves, "Some Problems in Indexing Middle English Recipes," *Middle English Prose* (see above, n. 63), pp. 91–113; and on the Middle English verse versions, see above, n. 70.

⁸⁷ To our knowledge, no one has attempted to sort out the impact of this influential pharmacological treatise on Middle English remedybooks, although some specific Middle English recipes have been linked to remedies from it. See Margaret Ogden, ed., *Liber de Diversis Medicinis* (see above, n. 76), p. xxiii, and D. C. Bain, "A Note on an English Manuscript Receipt Book," *Bul. Hist. Med.* 8 (1940): 1246–48. For a facsimile of an early printed edition of the *Antidotarium*, see Dietlinde Goltz, *Mittelalterliche Pharmazie und Medizin, Veröffentlichungen der Internationalen Gesellschaft für Pharmazie e. V.*, n.f. 44 (Stuttgart, 1976).

⁸⁸ "Some Problems in Indexing Middle English Recipes," texts of variants of Middle English recipes are pp. 101–04 and the discussion, pp. 92–93. The texts of the headache recipes are pp. 105–110, and the discussion, pp. 94–95. The texts of the seventeenth-century versions are pp. 111–13, and the discussion, p. 99.

⁸⁹ "Science," p. 3.

⁹⁰ "Medical Manuscripts," pp. 400–01, 403–06. D. W. Singer's unpublished catalog has more than 2,500 entries for recipes.

⁹¹ "Some Problems," p. 91.

⁹² *A Leechbook or Collection of Medical Recipes of the Fifteenth Century*, ed. Warren R. Dawson (London, 1934); *Liber de Diversis Medicinis*, ed. Margaret S. Ogden (see above, n. 76); Herbert Schöffler, *Beiträge zur mitttelenglischen Medizinliteratur*, Sächsische Forschungsinstitut in Leipzig

texts have been analyzed,⁹³ and there has been some recent editorial activity as well.⁹⁴

The second and much more neglected group is made up of Middle English translations of learned Latin medicine that can usually be described as academic in origin; the original authors were antique or Arabic writers or medieval university masters. The surgeries—perhaps a misleading term because they usually include material on anatomy and remedies as well as surgery—make up a considerable portion of these texts. However, the Middle English surgeries of William of Saliceto, John of St. Paul, Roger of Salerno, and Henry of Mondeville remain unedited. We have editions only of the surgeries of Lanfranc, Guy de Chauliac (two editions), and the Englishman John Arderne.⁹⁵ Nonetheless, in the category of learned medicine, Middle English surgeries have received more attention than other kinds of theoretical treatises. Work has been done in the marginal categories of plague treatises⁹⁶ and gynecological works,⁹⁷ but the other

3, Anglistische Abteilung I (Halle, 1919); *Medical Works of the Fourteenth Century*, ed. George Henslow (London, 1899); *Ein mittellenglisches Medizinbuch*, ed. Fritz Heinrich (Halle, 1896); *Aus mittellenglischen Medizintexten: Die Prosarezept des Stockholmer Miszellankodex x. 90*, ed. Gottfried Müller, *Kölner Anglistische Arbeiten* 10 (Leipzig, 1929); some of the prose remedies in this manuscript were also edited by George Stephens, "Extracts in Prose and Verse from an Old English Medical Manuscript preserved in the Royal Library at Stockholm," *Archaeologia* 30 (1844): 349–418.

⁹³ Curt Bühler, "A Middle English Medical Manuscript from Norwich," pp. 285–98 in *Studies in Medieval Literature in Honor of Professor Albert Croll Baugh*, ed. MacEdward Leach (Philadelphia, 1961); J. Harland, "Some Account of a Curious Astronomical, Astrological and Medical Manuscript in the Chetham Library, Manchester," *Transactions, Hist. Soc. of Lancashire and Cheshire*, Session 29, 3rd series, 5 (1876–77): 1–8; Ernest W. Talbert, "Notebook," and D. C. Bain, "A Note," n. 87.

⁹⁴ Elaine M. Miller, "'In Hoote Somere': A Fifteenth-Century Medical Manuscript" (Ph.D. diss., Princeton University, 1979).

⁹⁵ See above, n. 79. *Lanfrank's "Science of Chirurgie"*, ed. Robert von Fleischhacker, EETS 102 (Oxford, 1894), is based on two manuscripts. Robbins, "Medical Manuscripts," p. 406, lists six other codices; for the Middle English Guy de Chauliac, he lists seven manuscripts, p. 406. One of these manuscripts has been edited by Margaret Ogden, *The Cyrurgie of Guy de Chauliac*, EETS 265 (London, 1971), and another by Björn Wallner, *The Middle English Translation of Guy de Chauliac's Anatomy, With Guy's Essay on the History of Medicine*, *Lunds Universitets Årsskrift*, n.f. Avd. 1, Bd. 56, Nr. 5 (Lund, 1964); *The Middle English Translation of Guy de Chauliac's Treatise on Fractures and Dislocations*, *Acta Universitatis Lundensis*. Sectio I. Theologica Juridica Humaniora 11 (Lund, 1969); *A Middle English Version of the Introduction to Guy de Chauliac's Chirurgia Magna*, *Acta Universitatis Lundensis*. Sectio I. Theologica Juridica Humaniora 12 (Lund, 1970); *The Middle English Translation of Guy de Chauliac's Treatise on Wounds, Part I: Text*, *Acta Universitatis Lundensis*. Sectio I. Theologica Juridica Humaniora 23 (Lund, 1976); *The Middle English Translation of Guy de Chauliac's Treatise on Wounds, Part II*, *Acta Universitatis Lundensis*. Sectio I. Theologica Juridica Humaniora 28 (Stockholm, 1979). Robbins lists eleven manuscripts containing the Middle English version of John Arderne's *Treatise of Fistula* (p. 406); see *Treatises of Fistula in Ano, Haemorrhoids, and Clysters*, ed. D'Arcy Power, EETS 139 (London, 1910). As mentioned above (n. 50), Beck prints a portion of the Middle English surgery from Brit. Lib. Harley MS. 1736 that he identifies as a text written by Thomas Morstede.

⁹⁶ See Robbins, "Medical Manuscripts," p. 407. In addition to the Singer survey and *Catalogue*, and the Sudhoff and Bowers editions mentioned there, see Herbert Schöffler, *Beiträge zur mittellenglischen Medizinliteratur*, *Sächsische Forschungsinstitut in Leipzig*, 3, Anglistische Abteilung I (Halle, 1919).

⁹⁷ *Medieval Woman's Guide to Health: The First English Gynecological Handbook*, ed. Beryl Rowland (Kent, Ohio, 1981), rev. Jerry Stannard and Linda Voigts, *Speculum* 57 (1982): 422–

long texts remain neglected. Robbins records a treatise on the theory of medicine;⁹⁸ there are Middle English versions of Latin works of Gilbertus Anglicus and Bernard of Gordon,⁹⁹ and the long compendium at the end of Gonville and Caius MS. 176/97 is in need of an editor.

Against this general analysis of Middle English medical writings, the academic medical texts that follow the phlebotomy in that codex deserve a summary. "Of Phlebotomie" is followed by mathematical, astronomical, and astrological scraps—partly in Latin. After that, on pp. 16–19, English resumes; we find in list form the introduction to the concepts and doctrines of Galen's *Techni* as laid out by Ḥunain ibn Ishāq (Johannitius) in the *Isagoge*. That is to say, we find lists of the *res naturales*, *res non naturales*, and *res contra naturam* followed by *quaestiones et responsiones* that define the categories and subcategories of the *res naturales*: elements, complexions, humors, members, virtues, senses or operations, spirits, and age.¹⁰⁰ The last of the short texts follow on pp. 20 and 21 with material on causation—material, formal, efficient, and final; some questions on disorders; and a listing of members by complexion.

Between these short texts and the lengthy compendium are a number of stubs and fourteen leaves originally blank but now containing a variety of later additions. The long compendium then occupies nearly two hundred pages (pp. 37–228), breaking off in what appears to be the last chapter. This elaborate compilation begins with the wisdom prologue that concludes with the justification, "lakkyng of wise fysicians," for translating the compendium for the barber, Thomas Plawdon of London. It then presents a twenty-page discussion of the origins of illness, whether malfunctions of the members or of the humors; it refers to Johannitius, Constantine's *Pantechnei*, Galen's *Techni*, and the *Canon* of Avicenna. This is followed by a further commentary on humors and a lengthy (55 pages) section on urines that cites the encyclopaedist Bartholomaeus Anglicus (although the material is not found in his encyclopaedia) and then the medical authorities Isaac Israeli and Giles of Corbeil, as well as a commentary on the latter. A long discourse (69 pages) on fevers, next, apparently draws on Rhazes, Hippocrates, Galen's commentary on the *Aphorisms*, and Walter Agilon.

26; and *The "sekenesses of wymmen": A Middle English Treatise on Diseases in Women*, ed. M.-R. Hallaert, Scripta 8 (Brussels, 1982).

⁹⁸ Glasgow, Hunterian MS. 307, "Medical Manuscripts," p. 399, n. 15; this 166-folio treatise is dated late fourteenth century.

⁹⁹ Faye Marie Getz, "An Edition of the Middle English Gilbertus Anglicus Found in Wellcome MS. 537" (Ph.D. diss., University of Toronto, 1981). Bernard of Gordon's *De prognosticatione* in Middle English is to be found in Manuscript 60 recently acquired by Toshiyuki Takamiya; we are grateful to Prof. Takamiya for this information.

¹⁰⁰ *Questions on Medicine for Scholars*, trans. Paul Ghalioungui (Cairo, 1980). On *Isagoge* material, see Michael McVaugh, "An Early Discussion of Medicinal Degrees at Montpellier by Henry of Winchester," *Bul. Hist. Med.* 49 (1975): 58–59, and Luke Demaitre, "Nature and the Art of Medicine in the Later Middle Ages," *Mediaevalia* 2 (1976): 26–28. On the *res non naturales*, see Saul Jarcho, "Galen's Six Non-Naturals," *Bul. Hist. Med.* 44 (1970): 372–77; L. J. Rather, "The 'Six Things Non-Natural,'" *Clio Medica* 3 (1968): 337–47; and especially Peter H. Niebyl, "The Non-Naturals," *Bul. Hist. Med.* 45 (1971): 486–92.

Included in this section is a discussion of a technical difference between Galen and Avicenna on the nature of synochal fever. On the remaining 39 pages are to be found three chapters on simple and compound medicines and seven on ailments of specific members before the text breaks off in the middle of the 42nd chapter, on kidney disease.

In short, Gonville and Caius MS. 176/97 contains, in addition to the phlebotomy, other texts that differ markedly from the better-known vernacular remedybooks. Texts of this sort, with the exception of a few of the surgeries, have been generally ignored by scholars, and that situation is unfortunate because the picture of vernacular medical writing in the late fourteenth and the fifteenth centuries in England is much different when these are included. This class of texts differs markedly from the remedybook category not only because of the theoretical elements, but also because they lack the "open" nature of the remedybook; they are much less subject to empirical modification or addition. Furthermore, they hold the potential for areas of study not possible with the remedybook; with this body of writing one can and should study the translation techniques for Englishing technical, hypotactic Latin prose; and it is this body of texts that may make it possible to study the relation between Continental and English medicine. These studies would occupy many years and many scholars. We mean to begin with the phlebotomy.

D. THE MIDDLE ENGLISH TEXT: RELATED TRACTS, DATE AND DIALECT, MANUSCRIPT

i.

As the preceding survey of the body of Middle English medical writing makes apparent, "Of Phlebotomie"—like the short texts and the long compendium in Gonville and Caius MS. 176/97—falls in the category of those texts deriving from academic medicine. The bloodletting treatise in this codex—striking among phlebotomies in being based on the less common Latin tradition of organization by where to cut for what illnesses—must be compared to the other known prose¹⁰¹ Middle English bloodletting texts. There are doubtless more such texts than have been thus far identified,¹⁰² but Robbins's listing of prose phlebotomies is a place to begin. He does not list Gonville and Caius MS. 176/97, but he does catalog three from Cambridge college libraries: Gonville and Caius MS. 84/166, Emmanuel MS. 69, and Trinity MS. 1033; nine at the British Library: Egerton MS. 2433, and Sloane MSS. 121, 213, 634, 706, 783B, 965, 2581, and 3449; and one in the National Library of Wales: Peniarth MS. 388 (Part I).¹⁰³ We have investigated these manuscripts¹⁰⁴ and have found that most

¹⁰¹ For Middle English bloodletting verse, see above, n. 71.

¹⁰² See above, nn. 67 and 68.

¹⁰³ "Medical Manuscripts," p. 402, n. 25.

¹⁰⁴ We have examined all these manuscripts except National Library of Wales, Peniarth MS. 388, Part I. Professor Maldwyn Mills of the University College of Wales, Aberystwyth, kindly consulted this codex for us and transcribed the bloodletting passages. Intermingled

of them contain texts quite different from "Of Phlebotomie"; they are rather unlearned treatises—often of a how-to nature, or they deal with astrological considerations for bloodletting. Two of them, however, bear discussion in relation to the text edited here; they are Emmanuel College, Cambridge, MS. 69, and Gonville and Caius College, Cambridge, MS. 84/166.

Emmanuel MS. 69 is a manuscript containing English versions of the complete works of John Arderne, other miscellaneous remedies, and a plague tract.¹⁰⁵ John Arderne, a widely traveled Newark surgeon who was admitted into the Fellowship of Surgeons in London in 1370, was responsible for a number of shorter Latin treatises in addition to his well-known work on the surgical treatment of anal fistula. His complete works are found in Latin in British Library Sloane MS. 2002 and in the early fifteenth-century Middle English version in Emmanuel MS. 69.¹⁰⁶ The phlebotomy occupies folios 2r–3r in the latter codex; it is written in Arderne's characteristic style and quotes Rhazes, Hippocrates, Avicenna, and Ptolemy. Like the phlebotomy in Gonville and Caius MS. 176/97, Arderne's "Hoc est Speculum Phlebotomie" in the Latin and the Emmanuel translation contains little astrology; in later fifteenth-century English versions, however, material on zodiacal influence on bloodletting is interpolated.

Arderne's "Mirror of Bloodletting" is a good deal shorter than the text of concern here, occupying in the Middle English version in Emmanuel MS. 69 only three pages, and it does not share the concern of most of the Gonville and Caius MS. 176/97 text, that is, to decide "in which maner sekenes flebotomie ys competent and of which veynis." Nevertheless, there are two sections in the Arderne work similar to the general discussions at the beginning of the text edited here. The first passage in the Emmanuel codex (fol. 2) is the fourth paragraph; it corresponds to lines 1–10 of "Of Phlebotomie:"

Wherfore after auctours it is diligently to be knowen bloodletynge schal be don medicinally; þat is to seye, oþer whyle it schul be don per methatisim & oþer whyle per antipasim. As yf þe passioun be old, þe minucoun schal be don by methatisim, and yf it be nywe it schal be don by antipasim. And it is called per methatisim whan þat þe blood is drawen out of þe same parti þere þat þe infirmite is. And it is called per antipasim whan þat þe blood is drawen out of þe contrarye part þere þat þe infirmite is.

with other remedybook material, the passages are, for the most part, unlearned notations on favorable and unfavorable lunary indications for phlebotomy.

¹⁰⁵ See M. R. James, *The Western Manuscripts in the Library of Emmanuel College* (Cambridge, 1904), p. 62. James does not mention the John of "Bourdews" plague tract on fols. 205–206v.

¹⁰⁶ For Arderne's famous work on anal fistula, see above, n. 95. For a discussion of the unpublished shorter works, see D'Arcy Power, "The Lesser Writings of John Arderne," *Seventeenth International Congress of Medicine*, Section 23, History of Medicine (London, 1914), pp. 107–33; "The Mirror of Blood-letting" is discussed on pp. 108–09.

Clearer parallels can be seen in the discussions of the four factors of principal concern. Compare the following passage from fols. 2v–3r of the Emmanuel manuscript to lines 59–84 of the Gonville and Caius text:

Fore þat in bloodletynge þer ben iiij þynge to be taken hede too, þat is to seye, tyme, custom, age & strengþe. And whanne þe wedyr is moste hottest, þer schall not inscisyon be made for lowsynge of þe body & for voydyng up of humours, for in suche hote wedir, þe humours ben dystroublyd & so þer myghte com out as wole of þe goode as of þe yuele.

And whan þe weder is moste coldest, þer schall no minucoun be made, for þan ben þe humours knet togydere & hard to be drawn oute & raþþer schullen þe goode come out þan þe yuele.

Noþer schalle no minucoun be made in þe nywe mone, for þe extremytyves of þe body be þan voyd of humours & by þe minucoun þey schulde be made more voyde, but it may be don be ii or iii dayes after.

.....
In veer & somere it schal be don in þe ryght parte, but in harvest & in wynter in þe lefte parte. . . .¹⁰⁷

Custom owt to be take heede too, for yf an old man be not wonte to be leten blood he schalle not blede, for custom & febylnesse be contrarious.

Age also schal be entended, for to fore xii yere þer schall no man be lete blood ne not þat is sette in age but yf he be stronge & full of strengþe & þat grete nede make it.

Yonge folke schul be leten blood in þe iiijth quarter of þe mone & aged folk schul be leten blood in þe iijth quarter, for þan ben þe humours meved from þe innere partes to þe utte as it scheweþ in þe flewyng of þe see. . . .

Strengþe also is to be consydered. Þe stronge schul be leten blood & þe feble schulle not, wherfore age & strengþe be more to be taken hede too þan tyme or custom.

While these parallels between “Of Phlebotomie” and John Arderne’s “Mirror” are striking, we cannot infer from them that Arderne knew the text attributed to Henry of Winchester. He could have known it, but it seems more likely that the basic principles for deciding on metacentesis or antispasis and the discussion of the roles of time, custom, age, and strength circulated independently of the greater part of the text Englished as “Of Phlebotomie.” Further support of this conclusion is to be drawn from an examination of Distinction 2 of Book 15 of the *Breviarium Bartholomei* of John of Mirfeld (fols. 292vb–295vb of Brit. Lib. Harley MS. 3).¹⁰⁸ In Chapter 5 of Bk. 15, Di. 2, “De qua latere facienda est flebotomia,” Mirfeld briefly discusses antispasis vs. metacentesis as regards a plectoric state (fols. 293vb–294ra), and in Chapter 7, “Quod sit faciendum & quam tempore flebotomia,” he discusses the four factors of time, custom, age, and strength (fol. 294va) in much the same sequence and detail as do the

¹⁰⁷ Ellipsis marks indicate Latin phrases, here deleted.

¹⁰⁸ Only comparatively brief portions of this long compendium have been edited by Percival Horton-Smith Hartley and Harold R. Aldridge (see above, notes 43 and 85), and that edition does not include Book 15. We take our reading from Brit. Lib. MS. Harley 3, a late-fourteenth-century codex.

similar passages in the Arderne and Henry of Winchester texts. The four factors are also presented—in simplified fashion—in the bloodletting section of *The Commonplace Book of Robert Reynes of Acle*.¹⁰⁹ What is important, however, is that these two sections in the text here edited are only preliminary to the greatest part of “Of Phlebotomie” that is concerned with the systematic discussion of diseases and the appropriate venesection for each disease, a discussion that is lacking in the Arderne, Mirfeld, and Reynes texts.

We have found, however, one Middle English treatise with a thoroughgoing resemblance to “Of Phlebotomie” in Gonville and Caius MS. 176/97, and it bears the similar title “Of Blode Lytting.” It is found in another codex in the same library, Gonville and Caius MS. 84/166, pp. 205–206, a manuscript that may have been owned by the physician John Argentine, provost of King’s College, Cambridge.¹¹⁰ This manuscript is assembled from a number of booklets containing medical material. The booklet in which the Middle English phlebotomy occurs, pp. 193–208, is one in which several short texts are in the same hand. Among these texts there is a calendar beginning with 1443 (p. 195), so this portion of the codex can be dated to the mid-fifteenth century. Immediately following the text of concern there is more phlebotomy material, twenty-eight rules for bloodletting. The similarity of this shorter text “Of Blode Lytting” to the longer “Of Phlebotomie” is readily explainable. Whereas “Of Phlebotomie” is a translation of the *longest* version of “Henry’s” treatise, that beginning “Propositum est,” “Of Blode Lytting” is an independent translation of the *shortest* version of that treatise, the abbreviated form of the text with the incipit “Minutio alia.”¹¹¹ As we mentioned above, this abbreviated Latin version is to be found in Dickson Wright MS. 1 (among other manuscripts) and was edited from that codex by Charles Talbot in “A mediaeval Physician’s *Vade Mecum*.”¹¹² Talbot’s article includes a plate of the illustration of the bloodletting man that accompanies the text and suggests that the manuscript has Oxford origins. The more popular nature of the *vade mecum*, perhaps prepared for a village empiric, may explain the condensed and corrupt state of the Latin text in Dickson Wright MS. 1 and of the English translation in Gonville and Caius MS. 84/166.

We include the text of the Middle English phlebotomy in Gonville and Caius MS. 84/166 as an appendix. We think it valuable to have it to compare with Talbot’s Latin edition and to compare with the longer Latin and English versions here edited. Furthermore, making “Of Blode Lytting”

¹⁰⁹ Ed. Cameron Louis (see above, n. 77); see pp. 160–61.

¹¹⁰ M. R. James, *A Descriptive Catalogue of the Manuscripts in the Library of Gonville and Caius College*, 1 (Cambridge, 1907): 79–82. For a brief discussion on the composite nature of the codex and the variety of Middle English dialects represented, see Angus McIntosh, “A New Approach to Middle English Dialectology,” *English Studies* 44 (1963): 4. On the likelihood of Argentine’s possession, see Dennis E. Rhodes, “Provost Argentine.”

¹¹¹ See the list of manuscripts given above, n. 23.

¹¹² *Jnl. Hist. Med.* 16 (1961), 213–33; the text is edited pp. 223–24.

available along with “Of Phlebotomie” provides the reader with the opportunity to compare and contrast the independent translation efforts of two late medieval Englishmen in their efforts to turn a text into their mother tongue.

ii.

The lexicon of “Of Phlebotomie” seems to date the translation to the first quarter of the fifteenth century. It shares a number of words in common with other technical medical writings Englished during that period—the Arderne texts, the earlier manuscripts of the Middle English Lanfranc, and the two earlier versions of the Middle English Guy de Chauliac.¹¹³

The question of dialect is not so simple, however. There are two dialects to be dealt with: that of Scribe A, the late fifteenth-century supplier of two replacement leaves to the codex, the first folio, containing the two opening pages of the phlebotomy, and pp. 157–58 in the long compendium at the end of the codex; and that of the main scribe of the phlebotomy, Scribe B. Scribe B, whose association with the phlebotomy and other texts in the codex links him to the original production of the manuscript around 1425,¹¹⁴ is the more important of the two, and the dialect found on the leaves for which he was responsible is the more problematic. His orthography is too inconsistent for a useful analysis of vowels, but other features of his dialect reveal a curious admixture of Southern and East Midland forms. He frequently writes wh- as w-, perhaps a Southern feature, particularly when linked with the hypercorrection of the addition of h- before words with an initial vowel.¹¹⁵ Instances of this hypercorrection are found in lines 78 (2), 80 (2), 109, and 198.¹¹⁶ However, there is not a single instance of the -en Southern plural, and he uses exclusively the Midland rather than the Southern form for the third person plural pronoun: Bei or Pey.

An examination of Scribe B's verb forms is similarly inconclusive. For the third singular present indicative he invariably uses -iþ or -eþ, a form that can be either Southern or Midland, and for the plural present indicative

¹¹³ See “Title Stencils” in Hans Kurath, *Middle English Dictionary: Plan and Bibliography* (Ann Arbor, 1954), pp. 23–85. We are particularly grateful to Dr. Lister Matheson of the *Middle English Dictionary* for his comments on the lexicon in general and on specific lemmata in “Of Phlebotomie” not included in the *Middle English Dictionary*. If this text was Englished at the same time as the longer compendium at the end of the manuscript (translated for Thomas Plawdon/Plouden, d. 1413), then perhaps a date of ca. 1400 would be appropriate.

¹¹⁴ See discussion of hands in Section iii., below.

¹¹⁵ See Fernand Mossé, *A Handbook of Middle English*, trans. James A. Walker (Baltimore, 1968), pp. 76–78 et passim; and Kurath, *Middle English Dictionary: Plan and Bibliography*. We are most grateful for the comments on dialect offered by Morton Bloomfield and the late George B. Pace. Unfortunately, this manuscript had not been analyzed by the Edinburgh project, *The Atlas of the Dialects of Later Middle English*, when we corresponded with the editors.

¹¹⁶ Two instances of the hypercorrected *h* must be qualified, however. They occur where the Lat. *habundantes* or *habundant* is the word being translated, and there may well be contamination: haboundynge (l. 80), and habunde (l. 198).

he uses for the most part the Midland *-e* but occasionally the Southern *-eþ*. He frequently uses the *i-* or *y-* prefix for the past participle, a characteristic of both Midland and Southern dialects. The present participial form is almost exclusively the Southern and Midland *-i/ying(e)*, but there are two instances of the *-ande* form (lines 85 and 110), more characteristic of the North.¹¹⁷

In short, what we seem to have is either a text written originally in an East Midland or Southern dialect and imperfectly transmuted to the scribe's Southern or East Midland dialect, *or* a single level of dialect characteristic of a scribe whose native dialect originated where one could find this combination of East Midland and Southern forms, as, for example, eastern Essex. The dialect of Scribe A, who supplied the replacement leaves, is less perplexing and of less importance; his dialect displays for the most part East Midland characteristics with one or two Southern elements.

The translator of "Of Phlebotomie" seems to have been a reasonably good Latinist; there seem to be few instances where he does not understand the original. We cannot claim, however, that his translation skills were particularly masterful. We have presented the Latin and Middle English versions of the text in a facing-page format and with the same lineation so that the reader can readily observe the translation process. It should be apparent that this translator faced—and did not always overcome—many of the problems acknowledged by other Middle English translators, for example, the questions of what to do with *autem*, *enim*, *vero*, and the search for English constructions in which to translate the ablative absolute.¹¹⁸ This translator worked carefully but ploddingly, almost always translating clause by clause, or at most Latin sentence by Latin sentence, rarely attempting to see the larger unit. What appears to be an exception to this practice, where two Latin sentences have been efficiently combined on lines 244–47, may well be a situation where the sentences were combined in Latin and we do not have before us the precise Latin text used by the translator.

In the matter of Englishing technical words, the translator of "Of Phlebotomie" is reasonably successful; his text is for the most part free of the mistranslations found in "Of Blode Lyttyng," where the translator has Englished "*vena ad auricularem*" as "*þe wayn of þe eere*" (l. 44). The "Of Phlebotomie" translator frequently anglicizes a Latin term, as for example, *carnosi/carnose* (l. 80), but he makes a considerable number of attempts—more than forty before the English continuation begins on line 274—to explain a calque by pairing it with a native term, as in line 81 "*vigrose or strong*" for *vigrosi*. This use of doublets, frequently associated with the fourteenth-century translator John Trevisa, is an effective way to

¹¹⁷ See Mossé, fig. 11, p. 78, and Kurath, map 4, p. 9.

¹¹⁸ For a late fourteenth-century Middle English discussion of these problems of translation, see the "Prologue" to the later version of the Wycliffite Bible, in *Fifteenth Century Prose and Verse*, ed. Alfred W. Pollard (Westminster, 1903), pp. 193–99.

define a calque so that the translator is then free to use it without explanation.¹¹⁹

Not surprisingly, verb constructions pose the greatest problem to this translator. He does not have in his translational tool kit the seven methods of handling the ablative absolute used by the Wycliffite translators,¹²⁰ and he sometimes resorts to translating the construction quite literally as on lines 46–47 and 257. He customarily translates the participial construction beginning *laborans* as in “Laborans effimera . . .” with “Laboryng wiþ effimera . . .” (l. 90), whereas the translator of “Of Blode Lytting” (see Appendix A) translates “Laborans effimera . . .” as “The seke of efemera . . . be war . . .” (l. 36). The translator of “Of Phlebotomie” displays more effort, however, than the translator of Gonville and Caius MS. 84/166 in his efforts to find satisfactory English constructions; he seems to understand the second periphrastic conjugation but tries at least three different English constructions to create its equivalent (ll. 18, 47–48, 65). We should acknowledge, however, that at times his translation is successful, e.g., “it owþ to be done” for “debet fieri” (l. 20) or “he owt to eschewe flebotomie” for “cave flebotomias” (l. 49).

The continuation of the English text (ll. 274–307) is primarily cautionary. It cites Avicenna, Walter (of Agilon?), and Galen, medical *auctores* studied in the fourteenth century, rather than the Constantinian sources from the early thirteenth century cited in the main body of “Of Phlebotomie”;¹²¹ it is clearly a later addition. It warns the practitioner against letting blood after the fourth or fifth access of an interpolate fever. It also discusses the hazard of bloodletting when infected matter, as seen in carbuncles, is drawn into the blood by phlebotomy. The results of neglecting these warnings can be continual fever, rather than interpolate, and perhaps death. The continuation also, following Avicenna, Walter, and Galen, advises that careless cutting of a vein can result in an artery being cut—dangerous in itself and possibly resulting in a hematoma. It suggests that the safest way to slit a vein is to cut it lengthwise with a French lancet called a “warkyfe.”

iii.

The original contents of Gonville and Caius MS. 176/97—medical and scientific materials—have been described in the discussion of Middle English medical writings (p. 24). To recapitulate, the paginated manuscript contains “Of Phlebotomie,” pp. 1–11; short mathematical, astronomical,

¹¹⁹ Four valuable studies of the lexical problems faced by early French translators of medical writings are the work of Howard Stone: “Cushioned Loan Words,” *Word* 9 (1953): 12–15; “The French Language in Renaissance Medicine,” *Bibliothèque d’humanisme et renaissance* 15 (1953): 315–46; “Learned By-Forms in Middle-French Medical Terminology,” *Lingua* 4 (1954): 81–88; and “Puzzling Translations in the Thirteenth Century Multiple Equivalents in Early French Medical Terminology,” *Romance Notes* 10 (1968): 174–79.

¹²⁰ “Prologue” to the later version of the Wycliffite Bible, pp. 194–95; see above, n. 118.

¹²¹ See above, p. 7.

and astrological texts, pp. 13–16; *Isagoge* material, some in the form of *quaestiones*, pp. 16–21; stubs and leaves originally blank on which later material has been added, pp. 22–36; and the long medical compendium Englished for Thomas Plawdon, pp. 37–228. The codex, cataloged by M. R. James,¹²² has received attention primarily because the later materials on those leaves of the second gathering which had been left blank (pp. 12, 22–36), include stanzas from “The Complaint of Chaucer to his Purse,”¹²³ and lines from Gower’s *Confessio Amantis*.¹²⁴

The manuscript itself is written on rather coarse paper, and the watermarks are difficult to discern because they are found in the center of the bifolia and are tightly sewed in the binding. They fall in three groups: a variation on the type classified as *monts* by Briquet;¹²⁵ the *griffon entier*;¹²⁶ and a variation on the *pot*.¹²⁷ We may tentatively infer from the one watermark clearly identifiable in Briquet, the *griffon entier*, that the paper is late fourteenth-century or very early fifteenth. The folios measure ca. 216 × 143 mm, and the written space varies from 166 × 111 for the phlebotomy to 180 × 115 for the long compendium at the end of the volume. Our collation, which differs slightly from that of James,¹²⁸ is as follows: 1²⁴ (1 is a replacement leaf; wants 6 after 13; 11 is a replacement leaf); 2²²; 3–4²⁰; 5²⁰ (1 is a replacement leaf); 6¹⁶.

The two scribes responsible for “Of Phlebotomie” have been discussed above (D.ii) in terms of their dialects. Scribe A, responsible for two replacement leaves (pp. 1–2 and 157–58), writes in a hand that can be dated

¹²² *A Descriptive Catalogue of the Manuscripts in the Library of Gonville and Caius College*, 1 (Cambridge, 1907): 201–03.

¹²³ Stanza 3 and the envoy of Chaucer’s poem have been inserted in what had been blank space on p. 12, and the first two stanzas are written on the bottom of p. 23. The two separated groups of stanzas are from different recensions, but the poem is complete in the manuscript. See F. N. Robinson, ed., *The Works of Geoffrey Chaucer*, 2nd ed. (Boston, 1957), p. 919, and George B. Pace, “The Text of Chaucer’s *Purse*,” *Studies in Bibliography*, 1 (1948–49): 105–21.

¹²⁴ At the top of p. 23 are to be found six couplets titled “A Pure Balade of Love.” They were taken as an independent poem by Carleton Brown and Rossell Hope Robbins, *Index of Middle English Verse* (New York, 1943), and Robbins and John L. Cutler, *Supplement* (Lexington, Kentucky, 1965), No. 1827, and were published as such in *Cambridge Middle English Lyrics*, rev. ed., ed. Henry A. Person (Seattle, Washington, 1962), p. 38. We are grateful to Kate Harris for pointing out to us that J. A. W. Bennett correctly identified the lines as ll. 1623–34 of Book IV of John Gower’s *Confessio Amantis*; see Bennett’s *Selections from John Gower* (Oxford, 1968), p. 152.

¹²⁵ A form of the *monts* watermark can be found from pp. 3/4 through 69/70 (the first and second gatherings). There is no exact correspondence to the diagrams in C. M. Briquet, *Les Filigranes: A Facsimile of the 1907 Edition with Supplementary Material*, ed. Allan Stevenson, 4 vols. (Amsterdam, 1968), but see Nos. 11840 and 11814.

¹²⁶ The second category, the *griffon entier*, can be seen from pp. 81/82 through 189/90 (quires 3–5). These correspond to entries 7460–63 in Briquet, all products of north Italian papermills in the late fourteenth century (and, in one instance, early fifteenth century).

¹²⁷ This pitcher-like watermark is found on pp. 173/74 through the end of the codex (gatherings 5–6). There is no correspondence in Briquet, s.v. *pots*, but Stevenson points out in the supplemented volume (p. *34) that Briquet omitted many Norman papermills, that the *pot* is the typical Norman watermark, and that, at least during the sixteenth century, “Norman paper was the common paper in English books.”

¹²⁸ James’s collation (p. 201) is as follows: 1²⁴ (1 replaced, six leaves [? all blank] cut out in the 2nd half) 2²⁰–5²⁰ (1 replaced, one cancelled in 2nd half) 6²⁰ (wants 1, 9, 10).

to the last half, perhaps the last quarter, of the fifteenth century.¹²⁹ He writes in a secretary hand with occasional Anglicana forms, and appears at times to be confused by the text he is copying. Scribe B, responsible for the bulk of the phlebotomy and certainly the *Isagoge* material through p. 21, writes in a hand that can be dated to the first half of the fifteenth century, perhaps ca. 1425.¹³⁰ He writes in an Anglicana hand, using an occasional single-compartment *a*.¹³¹ He is also responsible for the scientific material, pp. 13–16, and the Johannitus material, pp. 16–21. Whether this scribe is also responsible for the long compendium on pp. 37–228 or it is the work of another scribe (B₂), writing in a similar hand, remains problematical. We either have the same scribe with a time lapse between the earlier writing of the long compendium in the last five quires and the more recent writing at the beginning of the codex, or we have two scribes with very similar training.¹³²

Although we do not know where this manuscript was written, we know something of its later history. The replacement leaves (pp. 1–2, 157–58) were added late in the fifteenth century, and a century after that an owner added his name to the book, writing “Robert” on p. 1 in the lower margin and adding at the end of the phlebotomy on p. 11, “Robert Wattins his book witniss Samuel Salt.” There are also three Latin medical recipes written in a Renaissance hand on p. 24 as well as some later notes on bloodletting on p. 35. There appears to be no record of this manuscript until it was left to Gonville and Caius College, Cambridge, with 150 other manuscripts by the alumnus William Moore (1590–1659), University librarian.¹³³

In the text we here present, the spelling of each scribe of “Of Phlebotomie,” however variable, is preserved. The letters p and z are printed as written, except for those instances (e.g., interpolatez, l. 153) where z serves to indicate a final s. The short and long forms of i/j are printed as they occur, as are u/v. In the case of Scribe A (ll. 1–47), who has supplied the replacement leaf at the beginning of the codex, a few adjustments have been made for easier reading. Scribe A has either misread the distinction between y and p in his exemplar, or he has failed to differentiate them from time to time in his orthography; hence he wrote pong for yong (ll. 39, 40, 41). There the orthography has been corrected and noted.

¹²⁹ We are grateful to Malcolm B. Parkes (letter of 5 July 1979) and A. I. Doyle for their comments on the hands in this manuscript. The paleographical nomenclature here used is explained in Parkes, *English Cursive Book Hands 1250–1500* (Oxford, 1969), pp. xiii–xxv.

¹³⁰ Parkes, who had available only enlarged microfilm printouts, commented that the *punctus elevatus* is a form associated with the late fourteenth and early fifteenth century but that there is also to be found an abbreviation mark more common from the second fourth of the fifteenth century.

¹³¹ The single-compartment *a* is not found more than 10 percent of the time in “Of Phlebotomie.”

¹³² A. I. Doyle points out that the hand in the long treatise differs slightly from the hand in the phlebotomy in its approach stroke to *f*, the curve of the descenders on *f* and *s* and in the single-stroke *r* of *-or*. He would not, however, exclude the possibility that the scribe who wrote the compendium also wrote the phlebotomy, scientific, and Johannitian material at a later period.

¹³³ James, *A Descriptive Catalogue*, 1: viii, and *Dictionary of National Biography*, s.v. “Moore, William.”

Similarly, where he has misread minims and recorded u/v for n (ll. 8, 44), correction has been supplied. A few emendations—usually the insertion or alteration of a letter—have been made to the text of Scribe B, the main scribe, on the basis of the Latin; these are noted.

Abbreviations are something of a problem in this manuscript. Both scribes abbreviate extensively for a vernacular text, and their systems differ somewhat. Abbreviations are expanded in the text here presented, but they are signaled by underscoring. It must be emphasized that the expansion is often conjectural because the scribes themselves vary the spelling of the same words when they write them out. Scribe B, for example, uses both the spelling after and afir, and two sets of suspension marks following the t. Likewise, p can mean both par- and per-, and it is sometimes not clear which is intended. The reader should heed the cautionary function of the underscoring. It is sometimes unclear what the scribe meant by a horizontal suprascript bar or what appears to be a curl at the end of some words when these may be otiose; most of these have been silently omitted. The final curl on r seems often, however, to signal the syllabic -re and so is always expanded. Crossed ll is expanded to -lle, although it may represent -lles, -llis, -llys in some instances. In expanding p^t, the form pat is used, as that spelling is employed by Scribe B; w^t is expanded as wi^p for Scribe B, as that is the expanded form he uses. It is left unexpanded for Scribe A, however, since we cannot be certain of his orthography. The ampersand is retained. Latin breviography, as ./. and .s., is indicated by the modern equivalents, to wit, *i.e.* and *sc.* In those Latin ingredients of recipes where the suspension or contraction is unclear, a point is used. Numerals, including ordinals, are left unexpanded.

Word division, not always clear in scribal usage, seems mostly to conform to modern practice. In the few instances where it does not, it has been altered in the direction of modern usage. Punctuation and capital letters are modern; the text has been punctuated to correspond to the Latin text. Most of the time, however, the sentence division agrees with the division indicated by both scribes by the use of the double virgule. Paragraphing has arbitrarily been inserted to make the Middle English text correspond to that of the Latin edition.

Scribal corrections are also explained in the notes, the note number referring to the preceding word or indicating the position of a cancellation. Cancelled words are given in the notes. Interlinear additions are supplied in round brackets. Words which seem to have been unintentionally omitted have been supplied in square brackets; if the Latin text justifies the emendation, a note of explanation is given. Loss of text is indicated by an arbitrary three points. Both Scribe A and Scribe B have supplied marginal glosses in the left margins. They are sometimes only partly discernible because of damage to outer margins or tight binding. Insofar as they can be discerned, they are indicated in the notes.¹³⁴

¹³⁴ Permission to publish this phlebotomy from Gonville and Caius MS. 176/97, pp. 1–11, and the Middle English phlebotomy in Gonville and Caius MS. 84/166 (Appendix A), has been kindly granted by the Master and Fellows of Gonville and Caius College, Cambridge.

TEXT

[TRACTATUS MAGISTRI ENRICI DE EGRITUDINIBUS FLEBOTOMANDIS]

Propositum est presentis negotii breviter tractare
in quibus egritudinibus flebotomia conferat et de quibus
venis. Notandum igitur quod minutionum alia per
antispasim fit, alia per metacentesim. Per metacentesim
dicitur fieri quando ex eadem parte in qua est 5
egritudo extrahitur sanguis, verbi gratia, si pleuresis sit in parte
sinistra fiat minutio ex sinistro brachio. Metacentesis sonat
tantum quantum linearis detractio. Per antispasim quando
e contraria parte fit minutio; et dicitur antispasis quasi contraria
decontractio. Notandum quod si corpus plectoricum sit, 10
debetur fieri minutio per antispasim, si non per metacentesim.
Si inveterata fuerit egritudo, debet fieri per metacentesim, si
recens per antispasim. Sed oritur quedam ambiguitas, quod si
corpus est plectoricum et passio est inveterata, secundum primum
preceptum debet fieri flebotomia per antispasim, secundum ultimum per 15
metacentesim. Ad hoc dicimus quod plectoricum preiudicat,
sive enim passio sit recens sive inveterata, dum
corpus sit plectoricum minuenda est per antispasim. Additur ad predictam
considerationem quod si materia fuerit furiosa, sicut in antrace,
licet corpus sit plectoricum, debet fieri per metacentesim 20
materia furiosa trahatur ad membra nobilia. Preterea si quis
punctus fuerit a venenoso animali, ut a serpente vel scorpione,
fiat per metacentesim si indigeat flebotomia.

Item notandum quod quandoque fit minutio per apoforesim,
id est propter multitudinem humorum vel propter debilitatem 25
patientis. Habemus siquidem ab auctoribus quod in sinoca inflativa
et in asmate de sanguine debet fieri minutio usque ad sincopim,
id est usque ad defectionem cordis. Nos autem timentes
vulgi opinionem facimus quod equipollet,
minuendo per apoforesim quantum subtrahi deberet secundum 30
eorum considerationem. Preterea si patiens fuerit debilis, in

4 antifrasim *M hic et passim* / methathesis *M hic et passim*

7 sinistro *D eodem M*

9–10 et dicitur . . . decontractio *D om. M*

12 si . . . metacentesim *D om. M*

15 debet fieri flebotomia *D om. M*

16 ad hoc dicimus *D alii quidem dicunt M*

18–19 predicta consideratio *M*

25 *post est add. M* per successivam minutionem et per repentivam detractioem vel (*om. D*)

30 subtrahi *D semel M*

31 *post debilis add. M aln^atl'm*

OF PHLEBOTOMIE

[T]he purpos forsoth of þis present besynes yt ys forto tret
 shortly in which maner sekenes flebotomie ys competent and of which
 veynis. Perfor it is to wyt that some minision is made or done by
 metacentesyn, *i.e.*, evyn drawyng, some by antepasyn. [By metacentesyn
 it] ys sayd to be done when þe blode ys drawyn on the same partie in 5
 which ys the sekenes, *Verbi gratia*, if pleuresis be in the left
 syde, be the minicion made in the left arme. Methasentesen sowneþ
 as mech as lenialⁿ detraccion, drawyng be lyne. It ys made by
 antepasyn when minucion is made, and anthepasyn ys sayd as wer contrare
 pascions. It ys to wyt forsoþ yf the body be plectoryk or replete, 10
 minucion owth to be done by antepasyn, elles forsoþe by methasentasyn.
 Also yf the sekenes be inveterat, *i.e.*, old, be metasentesyn. If [it] is
 to be resent or newe, by anthepasyn. But here resith a dut, if þe
 body be plectoric and the passion old, minucion owth to be by the
 fyrst comandmentⁿ done by antepasyn, by the last comandment by 15
 methasentesyn. To þis we say þat plectoric preiudizþ, *i.e.*, demyþ
 afore, wheþir forsoth the passion be newe or old, whilis forsoth the
 body plectoric be minysched be antepasyn. To þe forseyd consederacioun
 ys addyd to that yf the mater furios, *i.e.*, wode, as in antrace,
 þofe þe bodi be plectoric, it owþ to be done by methisentesyn þat 20
 the furri . . . mater be not drawyn to nobylle membris. Also yf any
 man be prickyd of venemus best as of serpent or of scorpion, [p. 2]
 be hit done by methasentisyn yf hym nedys fleobotomie.

Also hit ys to wyt that minucion ys done sumtyme byⁿ apofresim,
i.e., wiþdrawyng ovþir for multitude of humors or for debylete 25
 of the pacient. Where forsoþ of autorus þat in sinocha inflative
 & in asmite of sanguyne minucion owth to be done unto sincope,
i.e., swonyng, defaylyng of hert. Which forsoþ exschuyng the
 oppenion of þe comun peple doþ þat ys equifolent, or euyn þerto,
 in minushyng by apoferesim as mech as owth to be withdrawn after 30
 þe consederacion of hem. Ouer þat, yf þe pacient be feble, be

8 MS: leval

15 MS: be

24 margin: [ap]oforesim

magna quantitate fiat minutio per apoforesim, et inter detractiones reficiatur. Ut ait Galienus in Megategni, notandum si fiat minutio per apoforesim, intingatur flebotomus (5vB) in oleo ut vulnus teneatur apertum diutius.	35
Item ex consuetudine est quod quidam quando flebotomantur sincopizant; tales, ut ait Constantinus, parum reficiantur antequam flebotomentur cum electuario confortativo. Ex hoc patet quod senes post prandium cum super dormierint debent flebotomari, iuvenes vero ante prandium, quoniam senes debiliores, iuvenes fortiores. Alia est ratio: quoniam iuvenes calidis habundant humoribus, in horis calidorum humorum debent flebotomari—si sanguis superhabundet, ante tertiam, si colera, inter tertiam et nonam. Senes vero cum frigidis superhabundent humoribus et precipue melancolicis in horis melancolie debent flebotomari, id est post nonam. Rursus quidam habent sanguinem ita spissum quod vena aperta vix emanat; tales ante flebotomiam exercitandi sunt et balneandi. Preterea, ut habetur in Megategni, si aliquis habet stomachum defectum et debilem, cave flebotomias, et maxime illas que de venis fiunt in plicatura brachii, que sunt .v. Prima est cephalica, id est capitalis; secunda est mediana, id est cardiaca vel vena cordis; tertia est epatica vel basilica; quarta est vena purpurea vel funis brachii; quinta titillica vel titillaris, et est quedam vena super cubitum et est vena pulmonis. Flebotomia de hac multum confert in cardiaca et in asmate, sed hec vena solet inflari quando inciditur.	40 45 50 55
Nota quod in flebotomia .iiii. intenduntur principaliter: consuetudo, virtus, tempus, et etas. In tempore enim calidissimo non debet fieri flebotomia nec frigidissimo nec luna recenti, et est ratio in estate et maxime circa dies caniculares ultra modum dissolvitur corpus humanum et per dissolutionem multum inanitur. Si ergo per flebotomiam magis inaniatur, timendum est ne	60 65

32–34 et . . . apoforesim *mg. M*

39 super *D* post *M*

42 calidis . . . humoribus *D* habent *M*

48 post balneandi *add. M* et statim vel post exercitium vel balneum possunt flebotomari (*om. D*)

56 multum *D* pulmoni *M*

63 humanum *D om. M*

65 magis *D om. M*

32–34 *Megat. V, 193rB* (1515 ed.)

36–38 cf. *Megat. III, 191rB*, or *Pantegni pract. IX.ii*

46–48 cf. *Megat. XI, 202rB*

48–51 cf. *Pantegni pract. IX.ii*

51ff. cf. *Pantegni pract. IX.iii*

Þe made minucion by apoferesim in mech quanlite & atwix Þe
 withdr[a]wyng be he refreshyd. Yt is to wyt as seyþ Galien in
 Metategni Þat if it owth to be done by apofesisim, be Þe flebotom
 dippyd in oyle Þat the wond of Þe flebotomie be leng holdyn oppyn. 35
 Also sum men of custum when Þey are flebotomyd swoneþ; sech, as
 seþ Constantyne, be Þey refreshyd with ellectuary comfortatyve
 er Þey flebotomie.ⁿ If Þis ys hit that old men owth to be
 fleobotomyd after mete when they have aboue slepp, yongⁿ men
 forsoþ affore mete, for old men are more feble, yongⁿ men more 40
 strong. Also Þe is anothyre resone: for yongⁿ men sith Þey
 abovnd with hote humoris owth to be flubotomid in Þeⁿ ouyr of
 hote homors—if blode abovnd, afore terce, if colere, atwix terce
 and none.ⁿ Old men forsoþ sith they abovnd with cold humors and
 melancolie owth to be flubotomid in the ouyr of malencolie, that 45
 ys after none. Also sum have so thyk blode that the veyne yponyd
 ys vneth yput owte; sech afore fleubotomie are to be bathyd [p. 3]
 [and] exercisid. Ouer Þat, as it is had in Megategni, if any man
 have a stomac defective & owiþ & febele, he owt to eschewe flebotomie,
 & moste (þo) Þat are made of veynes Þat are in Þe plicatureⁿ or bowynge 50
 of Þe arme wheche are .v. veynes: Fyrst is cephalica, *i.e.*,
 capitalis or hedd veyne; 2, mediana or cardiaca, *i.e.*, veyne of Þe
 herte; 3, epatica or bacilica, lyuer veyne; 4 is vena purpurea,
 purpur veyne or corde of Þe arme; 5, titilica or titillaris, Þe
 is a veyne aboue Þe cubite or elbow which is seid vena pulmonia, 55
i.e., veyne of Þe lunges. Flebotomie made of Þis helpiþ moche in
 cardiaca & asmate, but Þis veyne when it is kitte is wont to be
 inflat or bolned.

It is to wete Þat in flebotomieⁿ 4 Þyngis are principalli
 attendid: *sc.*, custome, tyme, age, & vertue. In moste hote tyme 60
 forsoþ it owiþ not to be donne ne ful cold tyme ne in recent or newe
 mone. Þe reson or skelis is redi spede: in somere & moste aboute
Þe caniculere dayes mannys bodi ouer mersure is disoluyd; by
 dissoluyng it is moche inaynyte or anentisiþ. Þerfor if by
 flebotomie it be more inanyssched it is to eschewe or bewaer Þat 65

38 margin: . . . hy old/ . . . t after/[m]ete

39, 40, 41 MS: þong

42 margin: . . . oþer/ . . . use

44 MS: nove

50 margin: veynes/of Þe/arme

59 margin: principal/Þyngs

patiens incidat aliam egritudinem de inanitione. Alia est ratio, quia in tempore calido magis est humorum (6rB) perturbatio et per flebotomiam fieret maior, unde forte sequeretur aliquod nocumentum. In tempore frigidissimo non debet fieri minutio, quia humores sunt compacti et inepti ad educendum, et tunc boni potius educerentur quam mali. In recenti luna non debet fieri, quia tunc corpora sunt inanita et humoribus vacua et per flebotomiam magis inanirentur. Item consuetudo est attendenda. Si enim senex non consuetus fuerit flebotomari, et incurrat aliquam egritudinem exigentem flebotomiam, timemus flebotomare propter inconsuetudinem et debilitatem. Item attendenda est etas quia citra .xii. annum non debet aliquis flebotomari, neque senes in senio constituti, quia frigidis habundant humoribus; non tamen est generale. Sunt enim quidam senes qui carnosi sunt et sanguineae complexionis, calidis habundantes humoribus et vigorosi, et tales flebotomantur. Virtus maxime consideranda est; fortes debent minui, debiles vero non. Et nota quod virtus et etas magis considerantur in flebotomia quam tempus et consuetudo.	
Dicturi autem in quibus flebotomia conferat. Incipiamus a febribus, et primo ab effimera. Laborans ergo effimera ex calore, si virtus aut etas permanserint, minuant de cephalica dextri brachii in estate, in hyeme sinistri. Post minutionem accipiat zuccaram rosatam cum aqua frigida, vel si dives sit cum aqua rosata, et melius est. Laborans effimera ex esu calidorum stomacho inanito, minuat sibi de epatica dextri brachii in estate, sinistri in hyeme. Accipiat aliquod electuarium frigidum et epatis confortativum ut zuccaram rosatam, triasandali, dyarodon abbatis sine musco. Laborans effimera ex stomacho inanito ieunio vel exercitio vel ex frigiditate aeris, caveat sibi a minutione. Contra synocham inflativam, minuas sibi de vena mediana dextri (6rB) in estate, sinistri in hyeme, et hoc per apoforesim. Antiqui minuebant patientes synocham usque ad sincopim, duplici de causa: propter multitudinem materie vel ideo quia sincopis est defectus cordis, ex cuius defectu sequitur perturbatio et infrigidatio totius corporis,	70 75 80 85 90 95 100

67 perturbatio *D* ebullitio sive turbatio *M*

77 citra *D* circa *M*

80–81 calidis . . . vigorosi *D* (*emendavimus D ex ingeniosi*) habundantes humoribus et vigoribus simpl'm *M*

81 tales *D* calidis *M*

89–90 si dives . . . est *D* cum aqua rosata *M*

94–96 laborans . . . minutione *D* laborans effimera ex ira minuat cardiaca dextri brachii in estate, in hyeme sinistri; post minutionem accipiat zuccaram rosatam cum sirupo rosarum vel violarum *M*

100–101 vel ideo . . . corporis *D* multam faciebant sanguinis effusionem *M*

Þe pacient falle not into sum sekenesse of inanicioun. Anoþer
 reson þer is for in so hoot tyme þer is more trubbynge of humorys
 & by flebotomie it scholde be made more, þat þerauentre þer
 schold folowe som oþer noyng. In ful colde tyme [not] to be donne,
 for þe humours are compatte & vnable to be brouzte ouzte, & þanne 70
 good are raþer browzte þanneⁿ euel. Also in newe mone it owyþ not to
 be don, for þann bodiis [are] inanished or voide of humours & be
 flebotomie þer scholdⁿ be more inanished. Also coustome is to be
 attendid. If an holde man forsoþe þat is not wont to be flebotomied,
 [p. 4] fale or renne in ony sekenesse askyng flebotomie whe drede for 75
 to flebotomie hym for vncustome & debilite or febilnesse.ⁿ Also age
 is to be atendid, for wiþinne þe 12 zere owiþ non to be flebotomyed,
 ne holde men sett in holde age, for þanne þei abunde wiþ colde humours.
 Nerþeles þis is not generale. Þere are forsoþe sum olde men þat
 hare carnose & of sanguyne complexioun, haboundyng wiþ hote humours 80
 & are moche vigrose or strong, & siche are flebotomyed. Vertu is
 moste to be attendid; strong men forsoþe owt to be minuschid, not
 feble forsoþe. Wite þu þat vertu & age are more to be attendid in
 flebotomie þanne tyme & custome boþe.
 Tho sei in wiche sekenesse flebotomie helpid; begynneⁿ at 85
 febres & first at efimera. Laborande in a febre efimera, sc., of
 hotnesse, if vertu and age suffre, mynusch he of cephalicaⁿ of
 þe rigt arme in somere, in wynter of þe lifte. After þe mynuschyng
 take he zuccar ros. wiþ water colde, or wiþ water of ros. if he be
 ricche, & he shal be þe bettere. Laboryng wiþ effimera of etyng 90
 of hoot þyng þe stomac inanissched, minusche heⁿ hym of cephalica
 of þe rygt arme in somer, of þe lift in wyntir. Aftir take electuary
 frigidam & confortatyue of þe lyuere as zuccar ros., triasandalis,
 diarodoun abbatis sing musco. Laboryng wiþ efimera of fastyng
 or excerie or of coldenes of þeⁿ aire, eschewyng or war hym of 95
 mynuschyng. Laboryng of efimera weche we sei synocham inflativam,
 mynuschⁿ hem of mediana of þe ryzte arm in somer, in wyntir of þe
 lifte; & þat be apoforesyn. Olde men minusched þe pacient be
 sinocham (vnto) sincope, for double cause: for þe multitude of
 matere orⁿ þerfore þat in syncope is defaute; of mowyng of þe hert 100
 orⁿ defaylyng scuwiþ in frigidacat or coldyng of al þe bodi.

71 margin: mone

73 margin: costome

76 margin: age

85 margin: effimera

87 margin: of heet/cephalica

91 margin: of hoot/metis ce/phalica

95 margin: of fastyng/of excersie/of coldnes

97 margin: synocham

100, 101 MS: of

quia ergo in synocha maxima erat caloris distemperantia, minui
 debet usque in sincopim ut per frigiditatem ingeneratam
 a sincopi tantus calor ex toto recedat vel saltem
 minuatur. Nos autem, timentes secundum 105
 vulgi opinionem, tantum pluribus vicibus detrahimus quantum
 ipsi semel, et de vena mediana, et hac ratione: ipsa
 enim tam superiores quam inferiores bene
 exhaurit—constat enim ex ramo basilice
 et ex ramo cephalice. Laborans effimera concomitante 110
 apostemate cerebri, sicut frenesi, si virtus et etas permiserint, minuat
 sibi de cephalica dextri brachii in estate, in hyeme sinistri, et
 hoc usque ad quartum diem. Sed notandum quod quibusdam laborantibus
 acute supervenit frenesis post quartum diem. Hos tamen
 nōn minuimus de aliqua vena brachii; facimus quod 115
 equipollet. Aperimus enim capita venarum in naribus
 existentia cum setis porcinis vel cum fusce, ut
 sanguis fluat cum maxima quantitate. Laborans sinocha sive effimera
 concomitante apostemate cerebri post minutionem accipiat electuarium
 confortativum et frigidum, ut zuccara rosata cum sirupo rosarum vel 120
 violarum. Laborans effimera concomitante litargia, si virtus et etas
 permanserint, fiat minutio de vena existente inter pollicem sinistri
 brachii et indicem; post accipiat zuccaram rosatam. Laborans effimera
 con(6vA)comitante apostemate splenis, minuas sibi de vena salvatella
 que est inter medicum et auricularem sinistri brachii vel manus; 125
 post minutionem accipiat electuarium. Laborans effimera concomitante
 squinantia, de cephalica utriusque brachii minuat sibi; post minutionem
 accipiat dyamoron, quod si non habet, gargarizet mel rosatum cum
 decoctione stipticorum, ut psidie, rose, balaustie. Laborans effimera
 concomitante apostemate epatis, minuat sibi de basilica dextri 130
 brachii; post minutionem accipiat electuarium confortativum ut
 triasandali cum aliquo sirupo. Laborans effimera concomitante
 apostemate stomachi, minuat sibi de vena veniente ad pusillum
 digitum dextre manus; post accipiat electuarium stomachi
 confortativum et zuccaram rosatam cum violarum sirupo. Laborans effimera 135

102 distemperantia *D* distemperantiam *M*

103 ingeneratam *D* factam *M*

114 hos *D* os *M*

123 *post rosatam del. M laborans de basilica dextri brachii post minutionem accipiat electuarium confortativum ut triasandali cum aliquo sirupo, add. M laborans . . . sirupo (ll. 129–132 infra)*

125 *post manus add. M si virtus etasque permanserint*

127 *post sibi add. M si virtus et etas permanserint*

129–132 laborans . . . sirupo *locavit D hic, tr. M ante laborans (l. 123)*

130 *post epatis add. M si virtus etasque permanserint*

133 *post stomachi add. M si virtus et etas permanserint*

134 stomachi *D om. M*

Þerfor, for in sinocha was moste distemperanse of heete, it owiþ
 to be [p. 5] minisched to sincop, þat be þe coldenesse ybred
 in of þe sincop so mych feruour brennyng or heete go away or at
 þe laste be mynuschedⁿ or lesned. We forsoþe dredyng þe 105
 opynyoun of þe leude comoun peple, wiþdrawiþ as myche tymes as
 þei dide at ones, and of þe veyne mediana, for þis skel: it
 draweþ orⁿ avoydeþ (as wel) as doþ þe lauere parties as þe
 hupermore parties—it is made forsoþe of þe branche of basilica
 & of þe branche of sephalica. Laboryng of efimera folwynde 110
 apostum of þe brayne, as frenesi, ifⁿ vertu & age sufre, mynusche
 of cephalice on þe riȝt arme in somer, on þe lefte in wynter
 & þat to be 4 day. But it is to wete þat somme laboryng of acut,
i.e., agew, þe frensi comyþ aboue aftir þe 4 day. Neþereles we
 mynusche not þise of ony of þe arme veynes; neþerles we do þat is 115
 equifolent or euen to. We opene þe hededes of þe veynes beyng
 in þe nostrillisⁿ wiþ bristlis of a sweyn or wiþ a stikke, þat þe
 blod renne out a gret quantite. Laboryng wiþ sinocha or efimera
 folwyng apostum of þe heed, ater þe mynuschyng, take he electuary
 frigidaurum & confortative as zuccar ros. wiþ siripum ros. or of 120
 violette. Laborynge wiȝt efimera folwyng litargie, if vertu & age
 sufre, mynusche hym of þe veyne beyng atuiȝ þe þombe & þe schewyng
 of þe lifteⁿ arme; aftir take þe zuccar ros. Laboryng efimera
 folwyng apostum of þe splen, if vertu & age sufre, mynusche of þe
 veyne salvatilla weche is atwene þe leche fyngre & þe litil fyngre 125
 of þe lifte handeⁿ & take electuary. Laborynge efimera folwyng
 squinancie, mynusche of cephalica of boþe armes; aftir take diamoron,
 which if it be not haddeⁿ, gargarise he mel ros. wiþ (decoccioun)
 stiptik þyngre, as beþ ros., balistic, & c. Laboryng of efimera
 folwyng apostum of þe liuereⁿ, mynusche he hym of basilica of þe riȝte 130
 arme; aftir he take electuary frigidum & confortative as triasandle wiþ
 som siryp of ros. or of violet. [p. 6] Labryng of efimera folwyng
 aposteme of þe stomac, mynusche hym of þe veyne comyng to þe litil
 fyngere on þe riȝt hannd; aftir, take electuary confortative of þe
 stomac as succar ros. or sirypus ros. or violet. Laboryng of efimera 135

105 canc: to sincop

108 margin: . . . hi of/mediana

111 margin: apostem/frenesi/[cep]halica

117 margin: veynes/þe nose

123 margin: þe veyne/tuix þe/[þ]ombe & þe/[s]hewyng/[fi]ngre

126 margin: lyuere/safilica

128 canc: &

130 margin: lyvere/basilica

concomitante apostemate renum vel vesice, minuatur sibi de
 sophena, que dirigitur ad cavillam pedis vel
 ad pollicem pedis; post faciat ut diximus.
 Laborans effimera concomitante apostemate costarum, minuatur
 de cardiaca dextri brachii. Quod autem 140
 invenitur in Viatico, scilicet laborantem pleuresi debere minui de
 basilica, hec est ratio: actor consideravit spiritualia
 posse debilitari in pleuresi; si fieret minutio de
 cardiaca fuerit maior debilitas. Laborans
 effimera concomitante perypleumonia, minuatur de vena existente 145
 super cubitum in parte inferiori. Laborans pleuresi vel
 perypleumonia, post minutionem accipiat aliquod electuarium frigidum
 humectativum spiritualium, ut dragagantum frigidum, cum decoctione
 herbarum frigidarum vel seminum duum, ut citrulli, melonis, cucurbite,
 cucumeri, cum aliquo lenitivo, ut dragaganto aroydo. 150
 Restat dicere de febribus putridis, et prius de interpollatis.
 Notandum autem quod contra rationem videtur patiens interpollata
 flebotomari; flebotomia enim educit humores
 tantum intra vasa existentes, febris autem interpollata
 habet tantum fieri ex humoribus extra vasa putrefactis, ad quorum 155
 educationem non videtur competere (6vB) flebotomia. Ad hoc potest dici
 quod competit flebotomia patienti interpollata duabus de causis: vel quia
 ex humoribus intra vasa per flebotomiam eductis non administratur
 materia loco putrido, vel quia per flebotomiam vene evacuantur
 et gratia evacuationis attrahunt humores extra vasa existentes. 160
 Et sic multotiens cessat febris interpollata vel fervor
 minuitur, ut videtur tertiana, que sepiissime
 curatur per flebotomiam. Nota quod in die accessionis
 in horis eiusdem debet fieri minutio si sit fortis
 patiens ut materia egritudinis mota facilius 165
 educatur, licet antiqui aliud videntur velle.
 Iubent enim minui in die interpolationis,
 similiter et medicinam dari laxativam.

136 *post vesice add. M* si virtus et etas permiserint

137–138 *ad . . . pedis emendavimus ex ad cavillam pedis D* ad pollicem pedis *M*

139 *post costarum add. M* si virtus et etas permanserint

142 *post spiritualia add. M* m̄

143 *fieret minutio D* fient *M*

145 *post perypleumonia add. M* si virtus et etas permanserint

147 *post frigidum add. M* confortativum et (*om. D*)

148 *cum D om. M*

158 *administratur D* administrato *M*

159 *loco putrido emendavimus ex putredinis D* loca putrefaciens *M*

161 *fervor D om. M*

163–164 *nota . . . eiusdem D om. M*

folowyng aposteme of þe bledde or of þe reynes, mynuschē he hym of
 sophena, weche strechid to þe ancle of þe foot or ellis þat þat
 Strecchiþ to þe þomble too of þe fotte: after do he as we seide.
 Laborynge of efimera folowyng of sidis of þe ribbis, mynuschē hym
 of cardiaca, *i.e.*, mediana of þe riȝte arme. Forsobe þat is 140
 funden in Viatico, þat þe labryng of pluresis oweⁿ to be don of
 basilica; þis is þe skal & reson: þe autur considerid þe spiritual
 to be febled in þe pluresis; & if þer schold be don mynyscoun of
 þe cardiaca, þere scholde be mad mor febelynge. Laborynge of
 efimera folwyng peripulmonie, mynuschē he hym of þe veyne beyinge 145
 aboute þe cubit in þe neþirmore partie. Laborynge of pluresie or of
 peripulmonie, take after mynusch electuary frigidum & moistyng of
 þe wombe as diadragagantun, svme wiþ deccocioun of þe colde
 sedis & citrulle, melonis, cucurbites, & cucumeres wiþ sum anulo
 lenetive orⁿ softyng as dragagant. 150
 It is left behynde to sei of febris putrid, and fyrste of
 interpolates. Þerfore it is to wete þat it semyþ ageynyst resoun
 to be flebothomyed in interpolates; flebotomye forsoþe al only
 bryngiþ out humeros wiþin þe vestelis; febris forsoþe interpolates
 al only ben made of humerous putrefacte wiþoute forþe, to brynge 155
 out of wech flebotomye semyþ not compotent or acordyng. To weche
 we sei it is compotent for 2 causes: for orⁿ humours contenyd in þe
 vessel, *i.e.*, veynes & brouȝt out be flebotomye is not mynystrid
 materie to þe place putride, or for þat be flebotomye þe veynes ar voide
 [and] by cause of voidenesse ar drawe humourus wiþ outforþ contened. 160
 And soⁿ oft tymes [p. 7] ceceþ þe febire interpolates or þe fervour
 or brynnynge hete is lessid, as is sene of þe 3^{ne}, wiche ofte tymes
 is curid be flebotomye. Also it is to wete þat in þe day of accesse
 & in þe houre of þe accesse ouwiþ mynuscoun to be don if þe pacient
 be stronge þat þe materie of þe sekenesse ymoved be more liȝtli 165
 brouȝt out, þof al þat olde men semeⁿ to wille or wesche. Þay
 commande forsoþe in þat day of accesse, *i.e.*, interpolacoun,
 to be mynuschid, & also a medicyne laxatif to be ȝeffen þan.

 141 margin: Basilica

150 MS: of

157 MS: of

161 canc: al-

166 MS: some

Considerantes patientem in die accessus plurimum debilitari et perturbari propter febris molestiam, et si tunc flebotometur vel catarticum daretur, magis debilitaretur et maior in eo fieret perturbatio—et maxime corpora existentia in calidis regionibus debiliora sunt corporibus in frigidis regionibus existentibus. Nos autem considerantes corpora fortes, flebotomamus incipiente accessu et damus medicinam.	170
Laborantibus itaque cotidiana interpolata de flegmate naturali, si corpus plectoricum, minuat sibi de mediana vel basilica dextri brachii vel sinistri iuxta considerationem predictam. Laborans cotidiana de flegmate salso vel dulci, minuat sibi de mediana vel basilica dextri brachii vel sinistri; post accipiat aliquod electuarium frigidum confortativum. Contingit autem laborantibus de flegmate salso pruritus habere in partibus inferioribus; quibus scarificatio in tibiis una palma supra calcaneum prodest. Laborans cotidiana de flegmate acetoso, et si corpus sit plectoricum, minuat sibi de salvatella sinistre manus que est inter auricularem et medium; postea fiat ut supra diximus. Laborans cotidiana de flegmate vitreo nullo modo debet minui, nisi corpus sit valde pletoricum. Laborantibus tertiana de colera naturali, minuat sibi de basilica dextri brachii vel sinistri, et accipiat electuarium frigidum et humectativum pectoris, quia tertianariis veris solent pessime pectora desiccare. (7rA) Laborans tertiana de colera citrina vel vitellina, si putridos humores habuerit, faciat ut in tertiana vera. Notandum autem quod de colera prassina et eruginosa non solet febris induci; quia parum moratur in corpore propter naturam eas expellentem ad exteriora propter impetum sui motus. Si tamen humores habundant in stomacho alicuius, minuat sibi patiens ut dictum est in vera tertiana; accipiat electuarium frigidum confortativum stomachi, ut zuccara rosata et triasandali. Laborans quartana de melancolia naturali, minuat sibi post .vii. accessus de salvatella sinistri manus, que proprie exaurit melencoliam vel melancolicum humorem.	180 185 190 195 200

172 debilitarentur *M*

174 debiliora . . . existentibus *D om. M*

175 considerantes *D consideramus M/ fortes emendavimus ex for^a M*

177–178 si corpus pleutoricum *D om. M*

180 vel dulci *D si virtus et etas permanserint M*

185 et si corpus sit plectoricum *D si virtus et etas permanserint M*

187 postea . . . diximus *D om. M*

190 vel sinistri *D in estate sinistri in hyeme M*

191 frigidum et *D om. M*

192 tertianariis *D tertianis M*

195 colera *D om. M*

199 in vera tertiana *D vera M*

202 manus *D brachii M*

Consederyng þe pacyent to be myche febled in þe day of accesse & for to be ouertrobleid be þe diseas orⁿ hevynesse of þe febre, and if he ware þane flebomyed or acatarthies, *i.e.*, laxatif ygefen, he scholde be more feblid & more perturbacoun or troblyng schulde be made in hym; and moste for þe bodiis beyng in more hoot regiouns was more feble þan bodies being in colde regions. Whe forsoþe cosederynge þe body stronge, we fleubotomye hym þe accesse bygynyng & we gif medicyne.

Laboryng of codidian interpolate of flewme naturale, if þe bodi be plectorik, mynusch he of mediana of þe riȝthe arme or of þe lifte after þe forseid consederacoun. Labrynge of a cotidiane of dulce flewme or salse fleume, munusch of mediana or basilica of þe riȝth arme or þe lefte; after mynuschyng take electuary frigidum & confortativum. Forsoþe it befalliþ þe labrande of salse fleume for to have icchyng in þe neþer partie; to wech be more scarifyng in þe legge a palme, *sc.*, bout þe hele. Laborynge of a cotidian of fleume acetose if þe bodi be plectorik, mynusch hym of salvatilla of þe lifte hande weche atuxe þe litil fyngir & þe leche; after be don as we seide. Laborynge of a cotidiane of fleume vitre no manere mynusch, but if þe bodi be riȝt moch plectorice. Laborynge of a tercyane of colera naturale, mynusch hym of basilica of þe riȝt orⁿ lift arme after þe consederacoun yseide; take he electuary frigidum & humiditative of þe breste, for a tercianare is wont to have þe spirituales idryed. Laborynge of a terciane [p. 8] of colere citrine or vitelline if he have putride humorous in þe veynes, do he as in terciana vera. It is to wete þat of collere prassing & eruginose is not wont febre to be brouȝt inne; þay dwelle litil forsoþe in þe bodi, for þe nature puttyng hem oute to þe outwarde parties for hastynes of is meuyngis. Neþeles if þei habunde in þe stomac, mynusch he as is seid in 3ana vera; take electuary frigidum & confortative of þe stomac, as succar ros. & triasandalis. Laborynge of a quartayne of melancolie naturale, after þe 7th accese mynusch he hym of salvatilla of þe lift hand, weche propirli draweþ out or avoideþ melancolious humourus.

170 MS: of

190 MS: of

Laborans de melancolia innaturali, minuat sibi de basilica dextri brachii vel sinistri sicut in tertiana.	
Laborans tertiana duplici vel quartana, minuat sibi ut dictum est in simplici tertiana vel quartana.	205
Restat dicere de acutis. Laborans quacumque acuta, minuat sibi ad .iiii. diem, non ultra, quia tunc solet fieri augmentum; in augmento vero nec statu debet minui. Notandum autem quod in febris peracutis	210
principium non durat quandoque nisi per unum diem, et tunc in primo die debet fieri minutio et non post, unde Ypocras: medicari in valde acutis si expedit eadem die; differre autem in talibus	
est valde malum. Laborans cotidiana continua vel tertiana	215
vel sinocha vel causone, si virtus et etas permanserint, minuat sibi de basilica vel cephalica dextri brachii vel sinistri secundum predictam rationem; post accipiat aliquod electuarium frigidum confortativum, ut zuccara rosata, sandali cum sirupo violaceo vel rosaceo.	
Notandum quod actores tractantes de causone precipiunt non fieri minutionem, ut patet in Viatico, Libro febrium	220
Constantini, et hoc tali ratione. In causone enim est calor acutissimus propter siccitatem adiunctam que lima est caloris et consumens est. Si enim tunc fieret minutio magis acumeretur calor propter humiditatem sanguinis diminutam, que siccitatis efficaciam maxime habet reprimere;	225
et quod magis timetur in causone est (7rB) calor nimis acutus. Moderni vero in causone precipiunt minui in parva quantitate, ut sola fiat evacuatio et infrigidatio;	
post accipiat aliquod electuarium frigidum ut est zuccara rosata vel violarum vel micam panis ter lotam in aqua frigida.	230
Laborans ethica, si virtus et etas permanserint, minuat sibi de mediana vel basilica dextri brachii vel sinistri predicto modo, et hoc in parva quantitate. Solet enim sanguis in qualibet egritudine diuturna et febre ethica corrumpi	
cito, quapropter debet subtrahi ne sua corruptione	235

204 dextri . . . sinistri *D* sinistri brachii in hyeme et dextri in estate *M*

209 fieri augmentum *D* augmentari *M*/ augmento *D* declinatione *M*

212–213 et non post *D om. M*

215 cotidiana *D* 9ⁱ *M*/ vel tertiana *D om. M*

217–218 vel² . . . rationem *D* in estate sinistri in hyeme *M*

219 sandali . . . rosaceo *D* vel violarum *M*

222 Constantini *D* et Constantino *M*

226 in causone *D om. M*

228 evacuatio *D* eventatio *M*

230 frigida *D om. M*

232–233 vel² . . . modo *D* in estate sinistri in hyeme *M*

213–215 Hippocrates, *Aph.* IV. 10 (Littré)

221–222 cf. *Pantegni* pract. III.xxv

Laboryng of a quarteyne of melancolie not naturale, mynuschē hym of basilica of þe riȝt or of þe left arme as in þe terciane.

Laborynge of a double terciane or quartayne, mynuschē him as is seide in þe simple tercyane or quartane. 205

It is to sei of acutes, *i.e.*, agues. Laboryng of watsomeuer day acute, mynuschē hym to þe 4th day, not ouer þat, for þanne is wonte to be mad agment; in augment forsoþe or in þe state ouwiþ not to be mynuschēd. Neþeles it is to wete þat in febris peracutes, 210

i.e., stronge brenyng agues, þe begynnyge last not sumtyme ouer a day & þanne in þe firste day owiþ mynuschyngē to be don, & not aftirwarde wes, for seyþ y ypocras: in riȝt moche peracute if it spede do it þe same day; for to deferre forþsoþ or delay in siche it is euel. Labarynge of cotidiane contynuel or a terciān 215

contynuel or of synocha or of causon, if vertu & age suffre, mynusch of basilica or of cephalica þe lift or þe riȝt arme aftir þe consideracoun yseide; aftir take electuary frigidum & confortative, as succar ros. & triasandalis wiþ sirupe of ros. or of violett.

It is to weten þat auturs tretyn of causon commaundeþ not [p. 9] mynuschyngē to be don, as it schewiþ in Viatica & in Liber febris Constantyny, & þat be suche reson. In causon is moste heete is in drynesse ioned þerto weche is weston & file. Þanne if þer were 220

made mynuschyng þe heet scholde be more sch[a]rped for þe habundance of blod ymynuschēd, weche haþ to reþresse þe efecte of drynes & to scharpe het is þat þat is moste dred in causon. Men forsoþe 225

þat beþ now beddiþ to be mynuschēd in causon in a litil quantite, þat þere be made a ventosyngē alone & infrigidacoun, *i.e.*, coldnes; after take electuary frigidum as succar ros. or violeut or gommes of sourre bredd þres iwasche in g. colde watir. 230

Laborynge of þe etic, if vertu & (age) asuffre, mynuschē he hym of mediana or basilica of þe ryȝt or left arme, aftir þe consideracoun yseide, & þat in litil quantite. Laborynge in þe febre ethic & also in euery longe sekenesse is wont litil to be

corupt, wherefore it ouwiþ to be wiþ drawen þat be is conrupcoun 235

potius lederet quam iuaret; post autem accipiat electuarium frigidum et humiditatis restaurativum, et est dyadragantum.

Laborans quacumque specie ydropicis, si virtus et etas permanserint, minuat de basilica dextri brachii, et maxime in tympanite et
240
aschite. Alexander autem leucoflegmantiam patientem precepit flebotomari; humores enim mali et si sint in venis competenter educuntur. Post accipiat electuarium epatis confortativum; solent enim dropici in epate multum debilitari. Laborans yctericia citrina, si tempus virtus et
245
etas permanserint, minuat sibi de basilica dextri brachii. Laborans agracape gaselcontis, id est yctericia viridi, minuat sibi sicut in yctericia citrina. Laborans melanchiron, id est yctericia nigra, minuat sibi de salvatella sinistre manus, que melancolicum humorem extrahit et exhaurit. Laborans mania vel melancolia, minuat sibi de
250
vena existente inter pollicem et indicem sinistre manus, que secundum aliquos dicitur matrix, secundum alios vena mediana. Post hanc minutionem, si necesse sibi fuerit, minuat de vena que est in medio frontis, que quidem vena receptaculum est melancolie; et maxime inciditur vena illa si
255
egritudo fuerit in posteriori parte capitis, unde Ypocras: posteriora capitis dolentia, recta vena incisa in fronte, iuvat. Laborans empimate vel emotoyca passione, si virtus et etas permanserint, minuat sibi de vena existente supra cubitum, quam venam specialiter incidimus contra vitia
260
(7vA) pulmonis. Laborans epatis calefactione, sibi minuat de basilica dextri brachii. Laborans vitio splenis, de salvatella sinistre manus. Laborans vitio stomachi, de salvatella dextre manus, et maxime si causa fuerit calida. Laborans vitio renum et vesice vel
265
matricis vel colica vel yliaca ex epate, et videatur quod flebotomia conferat, sibi minuat de sophena interiori. Hac non inventa, incidatur illa que dirigitur ad pollicem pedis. Laborans malo mortuo existente in partibus inferioribus, sibi minuat de basilica dextri brachii vel sinistri. Postmodum, si necesse fuerit, sibi minuat

237 et² D ut M

242 *post* sint *add.* M frigidi

243–244 solent . . . debilitari D *om.* M

247 *post* citrina *add.* M et dicitur quasi agrestis mirscela cuius color est viridis

248–249 que . . . exhaurit D *om.* M

252 vena *emendavimus* ex r'o M

254 et maxime D *om.* M

255–257 unde . . . iuvat D *om.* M

260 *post* calefactione *add.* M si virtus et etas permanserint

267 pollicem D pl'oem M, *corr.* mg. ad p*atam

he hourte not rahþer þanne helpe; aftir take he electuary frigitatum & restauratif of humidite, as diadragagantum frigidum or sed or infusum or som electuary to restore humyditte or moystenes.

Laborynge of whatsoeuer spise of þe dropesi, if vertu & age suffre, mynusch of basilica of þe ryȝt arme, moste in tympanite and ashite. Alexandire forsoþe commandiþ a pacient leucoflamcie to be fleubotomyed; eu[e]l humourus forsoþe if þey be in veynes ar competently brouȝt out be flebotomye. Aftir, electuary frigidum confortatiue of þe lyuere; þe lyuere forsoþe it is moche wonte to be febled. Laboryng of ictercian citrina, *i.e.*, gelow iaundeyes,²⁴⁵ & also of agriacape gasiliones, *i.e.*, grene jawnes, mynusche of bacilica of þe ryȝt arme. Laboryng of malanchiroun, blac jawnes, mynusch of salvatilla of þe lifte hand, weche draweþ melancoliurus humourus. Laboryng of manya, *i.e.*, melancolia, mynusche of þe veyne beyng atuixe þe þombe & þe schewyng fyngre of þe lifte hand, weche after sume men is seide matrix, after oþer men forsoþe vena mediana is seid matrix. [p. 10] Aftir þis, if it be ned, mynusche he of þe veyne þat is in þe mydis of front, weche veyne is reseptacle or resceyvyngeⁿ of melancolie, & be þat veyne moste kutt if þe sekenesse be in þe hyndere selle, *i.e.*, partie of þe hedd; wherfor seiþ ipocras: þe hyndere partie of þe heed akynge, þe ryȝt streȝȝte veyne þat is in þe myddis of þe fronte ikutt, helpeþ. Laboryng of epymate or emoytoysi, if vertu & age sufre, mynusch he of þe veyne beyng aboute þe cubite, wech specialy we kytte agayne þe vice or trespae of þe lounges. Laboryng of chafyng of þe lyuere, mynusche of basilica of þe ryȝt arme. Laborynge of þe vice of þe splen, mynuscheⁿ of salvatilla of þe lifte arme. Laborynge of vice of þe stomac, mynusche of salvatilla of ryȝt arme, & most if colre be in þe cause. Laborynge of vise of þe reynes, of þe vesice, or of þe matrix, of colico, or yliaco, or of apostem, & it be sene þat flebotomye helpe, mynusche of sophena wiþin forþe. Þat not ifonde, be þat kutt þat is dressid to þe þombe too of þe foot. Laborynge of mormale beyng in þe louere partie, mynusch he firste of basilica of þe lifte or ryȝt arme. Aftir if it be ned, of sophena; & at þe

245 canc: mynysche of salvatilla

254 MS: resteyynge

262 MS: mynusche mynusche

de sophena; ultimo scarificetur in tibiis. Laborans podagra, minuat prius de basilica, postmodum de sophena. Laborans sciatica, et maxime de calida causa, minuat sibi de sophena exteriori—qui a Constantino sciatica vocatur—et valet contra sciaticam. Et hec sufficiant.

270

270 ultimo *D* interiori *M*

272–273 cf. *Viaticum* VI.xviii, or *Pantegni* pract. IX.ii

laste he be scarefied in þe leggis. Laborynge of þe potagre, 270
 mynusch firste of basilica, after of sophena. Laboryng of sciati[c]a
 & moost of hoot cause, mynusche hym of sophena wiþout forþ—weche
 of constantyn is seide sciatica—for it avayleþ agayne sciaticē
 pascoun. [Latin text ends; English text continues.] It is to wete
 aftir som men þat it is not to mynusch in tercianes interpolat but 275
 after þe 4th or 5th accesse, & on þe same wise in oþer febris
 interpolat. Also wete þat is warli to be don in mynuschyng for þer
 comyþ oft tymes moche pereiles: for som tyme men felyn prickynge of
 som euel materie aboute þe skyn & þe spondiles & gret gernouses,
 & of þis þus it is perceyued þat þe materies wiþoute þe veynes be," 280
 but þat materie þat is wiþout veynes as oftetymes is venymouse as
 it schewit in carbounkelis & carancres & antrax is" sike like, weche
 ileide to wiþinne veynes, it sleþe. [p. 11] Wherefor som vnwise men
 after þe consayle of oþer onwise men will þann mynusche hem, & of
 þat folwiþ a werse erre þann" þe firste. For þe materie þat was 285
 wiþoute þe veynes be flebotomye is drawen to wiþinne þe veynes;
 þann falliþ & continewe febre & so oftyn time deþ. Also som men
 when þei have a febre interpolat where þe" materie is wiþout þe
 veynes, makiþ hem to be mynusch & falliþ into continell febre;
 for whi: as afore, þe materie þat was firste wiþouten vestellis 290
 is brouzt be fleubotomye to wiþinne þe vercelis & so deþ.
 Also it is to wete þat unwarf man or onavisid mynuscheris or
 blodlateris oftymes erryn in flebotomyng. For after þat Avicenna,
 Walter, & Galien, & oþer auturis also will þat as ofte tymes or as 295
 euer undir every veyne of þe bodi which is to be mynusched is an
 arterie undir." Wherefor somtyme it befalliþ þat þe unaware mynuschere
 fro þe veyne smytiþ þe arterie & al þe arme is bolnyd. Also som tyme
 þey ar so royde or boystus þat in smytyng wiþ þe fyngere or sum
 like bynge, þe perce þe veyne vnto þe arterie be þe mydde; & þan
 sometyme rennyþ þe blod inwarde as outward & it standiþ þere, is 300
 putrifid & is made as ware, made venym; & þann also þe arme bolnyþ &
 more now for 2 causes: on, for þe blod rennyþ inwade; anoþer for þe
 arterie is kut be þe mydde of þe veyne & so falliþ moste pereile,
 for as ofte tyme deþ. Wherefore sekirnesse is more for to slit þe
 veynes aftir lengþe wiþ an instrument" as warkyfe as haþ French men & 305
 obire also, & namely þo þat han streyte veynes. And of fleubotomye
 þese þynge[s] sufisyn; after Maister Henricus Wyntonyensis. Amen.

280 MS: 3e

282 canc: &

285 MS: þann þann

288 MS: þe þe

296 MS: *þe veyne al moste* [flagged by expunction signs]

305 margin: lancet

III. APPENDIXES

APPENDIX A.

OF BLODE LYTTYNG

(FROM GONVILLE AND CAIUS COLLEGE MS. 84/166, PP. 205–06)

Lettyng of blode is to be consydered on 2 wyse. On is þat if
þe passion of þe sekenes be olde, þe blode lettyng schall be on þe
same syde þat þe sekenes aperys in. Þat is per metatisim. And if
þe passion of þe sekenes be new, þen þe blode lettyng schall be on
þe contrary syde þat þe sekenes aperis in. And þat is per antipasim. 5

Here hit is to consyder if þe mater of þe sekenes þat is in a
keyll be passyng standyng and fell. Þen þe blode lettyng schall be
on þe same syde þat þe seke pleynes hym on. On þe same maner who-
soever is wondyd w^t a wenemos best schall be lettyng blode on þe
same syde. Also chylder because þat in hem regnesⁿ grett habundance 10
of hote humors. Þerfore þay schall be lettyn blode in þe howres þat
hootⁿ humeres regne in. For why: syn blode regnes habundantle before
þe howre of 3 and þe humor of colerek regnes betwyx 3 and 9,
þerfore zonge folke in þise howres schall be letyn blode. Olde
folke, syn in hem colde humors haue dominacion and most of all humors 15
malancole, þerfore in þe howre of malancole after none schall þai
be letyn blode.

Hyt is to be war of 4 thyngys in blode lettyng: þat is to say,
tyme, custom, age, and strenght. Fyrst, in tyme þat is most hoot schall
not be lettyng of blode, for þen þe humors are turbulde, and as sone 20
passis forth þe gode humors as þe ill. Also in passyng colde tyme
schall not be lettyng of blode, for þen are þe humors so compacte
in þe body þat soner gos forth þe gode blod þen þe ill. Also in
a new mone schall not be lettyng of blode, for þen are mennys bodiys
voyde of blode and humors, and þen be lettyng of blode schall þai 25
be more avoyded and so folows þe more consumpcion. Also custom most
be taken hede of, for yf a nolde mon have not ben wonte to be lettyn
blode, þen he schall nott be lettyn blode for custom and waykenes.
Also age is to take hede, for beforⁿ 12 yere schall not be lettyn
blode, nar after a grete age. Neubelesse [p. 206] Þer be som men 30
of grett age þat haue grett strenght, and seche men may blede. Strength
is þe grettyste thyng to be consydered, for stronge men may blede,
butt vayke men nott.

10 canc: in hem

12 canc: blode

29 canc: 2

The mon þat is seke of over grete habundance of corrupte blode
 schall be leten blode at all tymes bot yf þe mone be in myddis of
 geminis. The seke of efemera of fastyng ar of coldenes be war of
 lettyng blode. Þe seke of frenesy be letten blode on þe vayn of þe
 hede. Þe seke of waykenes be lettyn blode w^t þe brestellys of a
 swyne in þe nase therles. Efemera is a axis whilk dures butt on day.
 Þe seke of lytergia in þe hynder parte of mannys hede þat bryngis in
 forgetyng in mannys mynde, be he lettyn blode betwyx þe leche fynger
 and þe lettyll fynger. Also beyng seke of þe swynese, be he lettyn
 blode on þe vayne cephalica of eyther arme. Þe seke of inpostym be he
 lettyn blode on þe wayn of þe eere. Þe seke of pluresy, inpostym in
 þe syde in þe rybbis, be he lettyn blode on þe same syde, on þe
 vayne cardiaca. Þe seke of axis quotidian restyng sum howrus in
 þe axis, be he letyn blode on þe vayne mediana. Þe seke on þe axis
 þat is causyd of flewme, be he letyn blode on þe wayne basilica,
 þat is þe vayne of þe liuer. Also beyng seke of sals flewme w^t
 3okyng, be he letyn blode w^t garsyng in þe leggis. Also beyng seke
 of a tercian, be he letyn blode on þe vayne of þe lyuer on þe ryghte
 arme in somer and on þe lefte arme in wynter. Also beyng seke of
 feuer etyke, be he letyn blode on þe wayne of þe lyuer.

Also beyng seke of any dropsy, be he letyn blode on þe vayne
 basilica. Þe seke of iaunsy, be he lettyn blode on þe vayne of þe
 lyuer on þe ryght arme in somer, and on þe lyfte arme in wynter.
 Also beyng seke of malancoly, frenesy, and wodnesse of þe hede, be
 he letyn blode on þe vayne in myddys of þe fronte. Also beyng seke
 of hete or chawfyng of þe lyuer, be he letyn blode on þe vayn basi-
 lica in somer on þe ryght arme, and on þe lyft in wynter. Beyng
 seke on disese of þe splene in þe ryght syde, be he letyn blode on
 þe wayn salvacella þat is betwyx þe leche fynger and þe lytell fyn-
 ger on þe lyfte hande. Also beyng seke of disease of þe reynes, or
 of þe moder, or on þe bledder, be he letyn blode on þe vayn sophena,
 þe nider wayn of eyther fote. Also beyng seke of wynde, be he letyn
 blode on þe wayn þat comys to þe grette too on þe foot. Beyng seke
 w^t inforth in þe lawer parteys, be he letyn blode on þe wayn sophena
 of eyther foot, and also be garsyng on l þe leggis. Beyng seke on
 þe gowte or podagra, be he letyn blode on þe wayn basilica, and
afterwarde on þe wayn sophena. Beyng seke of ciatica passion, be
 he letyn blode on þe wayn sophena of þe inworde parte of þe passion
 and disese.

Note here þat þe mone beyng in Geminis þat þer be no blode let-
 tyng in þe plykers of þe arme, ner in þe schylders no ventosyng.
 And if þe blod be blak in þe goyng forth, lett hyt passe tyll hyt
 com forth fayre and rede, and if hyt be watery, tyll hyt com forth
 more grett clere blode. And yf þe blode may nott com forth, stoppe
 þe holl w^t þi fynger and anon w^t grete myghte and strenght hyt will
 spyn owte.

APPENDIX B.

SUMMARY OF "TRACTATUS"/"OF PHLEBOTOMIE"

The treatise begins with a statement of purpose; it aims to treat briefly those illnesses helped by phlebotomy and to identify the relevant veins. It first discusses general principles for phlebotomy: metacentesis, or bleeding from the side on which the sickness is found; and antispasis, bleeding on the side opposite to the illness. It advises antispasis for a swollen body or a recent illness, metacentesis for other cases. When, however, the body is swollen and the disease old, the text accords priority to the plethoric state and advises antispasis. It recommends metacentesis even in the case of a plethoric body if inflamed matter is present, so as to avoid drawing the matter to the higher members. It also prescribes metacentesis for someone suffering from a venomous wound, as from a serpent or scorpion (ll.1–23).

The next principle discussed is apoforesis, or successive lettings, advised in the cases of excess humors or weakness. The treatise acknowledges a tradition of bleeding to the point of unconsciousness, but recommends withdrawing the same quantity of blood gradually, by apoforesis (providing the opportunity to refresh the patient between bleedings), dipping the lancet in oil to keep the wound open—as Galen advises. A fuller discussion of this practice is to be found in the subsequent section on synochal fever (ll. 98–110). The text counsels the advice of Constantine, that is, fortifying a patient subject to fainting with a strengthening electuary before phlebotomy, and bleeding old men after meals and the young before. It explains the latter practice in terms of dominant humors, hot for the young and cold for the old. It advises exercise and baths for those with viscous blood, and, citing the *Megatechni*, cautions against phlebotomy for those with a weak stomach, most particularly against letting blood from the five veins of the arm. These veins are the cephalic or head-vein; the median or cardiac vein; the basilic or hepatic vein; the purple vein or *funis brachii*; and the titillary vein, the vein for the lungs. Although bleeding from this last vein helps the heart and lungs greatly, the vein tends to swell when cut (ll. 24–58).

There follows a consideration of the four factors of principal concern in phlebotomy: custom, strength, time, and age. Venesection should be avoided in hot weather, cold weather, and at the new moon, for in summer, especially during the dog days, the body is weakened; hence if the body is further weakened by bloodletting, the patient may fall into worse sickness. Another factor in hot weather is the disturbance of the humors, which is

aggravated by phlebotomy. In cold weather the humors are viscous, so that the good rather than the evil are withdrawn. So too in the new moon is the body further weakened by phlebotomy, for it has fewer humors then. As regards custom, the text cautions against bleeding old men not accustomed to the practice, and, as regards age, warns against bleeding those under twelve and old men who abound in cold humors; however, it cites sanguine old men as exceptions to this rule. It accords greatest significance to strength and advises that strength and age should weigh more heavily than matters of time or custom (ll. 59–84).

The remainder of the text—and the largest part of it—is given over to identifying illnesses where phlebotomy is of value. Each disorder calls for its own particular treatment: the bloodletting point is given, and post-operative treatment is advised. The first consideration is of fevers (ll. 85–238), with a division into ephemeral and putrid; the latter group is made up of intermittent (quotidian, tertian, and quartan) and acute or continuous fevers (synocha, causon, ethica). The first ephemeral fever to be considered, that due to heat, calls for bleeding from the cephalic vein (right in summer, left in winter) if strength and age permit. Bleeding should be followed by administration of rose sugar and water or—for the rich—rose water. A similar treatment is advised for the ephemeral fever that results from consuming hot food on an empty stomach (the Latin advises the hepatic vein, the ME the cephalic). This treatment should be followed by the administering of a cold electuary good for the liver. However, ephemeral fever that results from fasting, exercise, or cold air should not be treated with phlebotomy. The median vein is advised for *synocha inflativa*, right in summer and left in winter, and the recommended procedure is apoforesis. Ephemeral synochal fever is apparently to be distinguished from putrid synochal fever (l. 216). Ancients let blood for synochal fever until the patient fainted, for two reasons: because phlebotomy depletes an excess of matter, and because the heat of synochal fever can be dissipated by the coldness of the body that results from fainting. However, in spite of common opinion, the text advocates withdrawing the same quantity at intervals rather than at once and using the median vein; the median vein voids from both the upper and lower extremities (ll. 85–110).

For ephemeral fever accompanying aposteme of the brain, or frenzy, if strength and age permit, blood should be let from the cephalic vein (right arm in summer, left in winter) until the fourth day. However, if the onset of the frenzy comes after the fourth day, arm veins are proscribed; blood should be let instead from veins in the nostrils with swine bristles or an instrument. Postoperative treatment is a cold and strengthening electuary. In the case of ephemera with lethargy, if strength and age permit, the text advises bleeding between the left thumb and forefinger and giving rose sugar. For ephemera with aposteme of the spleen, if strength and age permit, blood should be let from the salvatilla vein (between the ring and small finger of the left hand) and an electuary given. For ephemera with quinsy, the patient should be bled from cephalica of both arms and

given diamoron afterwards if it is available; otherwise the patient should gargle rose honey with a styptic decoction. For ephemera with liver aposteme, the patient should have blood let from basilica of the right arm and a cold and strengthening electuary such as triasandal with syrup administered. For ephemera with stomach aposteme, bleeding should be done from the vein that goes to the small finger of the right hand and followed by a draught of an electuary that strengthens the stomach. In the case of ephemera with aposteme of bladder or kidneys, blood should be let from the sophena that extends to the ankle or to the great toe and postoperative treatment given. For ephemera with aposteme of the ribs, bleeding should be from the right cardiac vein. The text cites the advice from the *Viaticum* that instructs that pleurisy indicates the use of basilica lest there be more weakening of the respiratory organs by taking blood from the cardiac vein. In the case of ephemera with pneumonia, bleeding should be done from the vein lying above and behind the elbow. After phlebotomy for pleuresy or pneumonia a cold electuary to moisten the respiratory organs (ME: the stomach) should be administered (ll. 110–150).

The second kind of fevers considered is putrid, and the first division of putrid fevers consists of intermittent fevers. The text acknowledges that it may seem unreasonable to let blood for periodic fevers because they derive from putrid humors outside the blood vessels and phlebotomy brings out only those humors within the veins. However, the text offers two justifications for the use of bloodletting: either because the matter led from within the veins by bleeding cannot then be directed to the diseased area, or because phlebotomy empties the veins and this emptiness draws into the veins the humors outside them. Hence, intermittent fever can be reduced, particularly in the case of tertian fever which is often helped by phlebotomy. The treatise also notes that bloodletting for a strong patient is best done on the day and hour of the onset so that (evil) matter can be quickly evacuated. Older authorities, however, considered that letting blood and administering a laxative on the day of access was problematic because on that day the patient is weakened or vexed by the disease or fever and treatment by phlebotomy or laxative might result in further enfeebling and disturbance of humors, particularly in the case of bodies weakened because they are in hot regions. However, the text concludes that phlebotomy and medication are appropriate at the onset of fever if the patient is strong (ll. 151–176).

In the case of quotidian fever from natural phlegm and a swollen body, the text advises letting blood from mediana or basilica (ME names only mediana) on the right or left side according to the usual consideration. In the case of fever from salt or sweet phlegm, a similar course of action is advised along with a cold and strengthening electuary. Patients with salt phlegm may itch in the lower parts and may be benefited by scarifying the legs a palm's distance above the heel. In the case of quotidian fever from sour phlegm, where the body is swollen, bleeding should be done from salvatilla on the left hand and postoperative treatment administered.

In the case of quotidian fever from vitreous phlegm, blood should not be let unless the body is swollen (ll. 177–189). For the four pathological forms of phlegm, see Appendix C, s.v. “flewme.”

The text then considers tertian fevers from natural choler and for such fevers advises bleeding from basilica of the right or left arm (ME says according to the usual considerations) and administering a cool, moistening electuary because tertian fevers dry the chest. In the case of tertian fever from yellow or vitelline choler, appropriate treatment is as for a true tertian if the putrid humors are in the veins. Green and burnished choler usually do not bring on fevers since they are quickly evacuated from the body. For an excess of humors in the stomach, bleeding should be done as for a true tertian and then a cold electuary that strengthens the stomach given (ll. 189–200). For the four pathological forms of choler, see Appendix C, s.v. “colere.”

In the case of a quartan fever from natural melancholy, after the seventh access blood should be let from the left salvatilla, the appropriate vein for evacuating black bile. In the case of quartan fever from unnatural melancholy, bleeding should be done from basilica of the right or left arm as in tertian. Double tertian or quartan fever should be treated as simple tertian or quartan fever (ll. 200–206).

In turning to the second kind of putrid fevers, the text takes up acute or continuous fevers which should be treated by bleeding only until the fourth day as it is unwise to use phlebotomy in the augmented state of a fever. However, in the case of a peracute fever when the initial state lasts not over a day, the bloodletting should be done during that first day, for as Hippocrates advises, to delay is dangerous. Continual quotidians or tertians or the kinds of acute fever called synocha or causon call for bleeding from basilica or cephalica of the right or left arm as is appropriate (if strength and age permit) and administering a cold and strengthening electuary. Authors like Constantine who write of causon warn against bloodletting in causon since this is the hottest and driest of fevers and the condition might be made worse by the reduction of blood. Contemporary men suggest letting a little blood (ME says by cupping alone) and afterward giving a cooling electuary or sour bread washed three times in cold water (ll. 207–230).

In the case of the last kind of acute fever, ethica or hectic fever, the text advises letting blood from the mediana or basilica from the right arm or left according to the season, and bleeding only a small quantity. The patient suffering from hectic fever and from longlasting illness may have corrupt blood, so it is necessary to withdraw the corruption carefully in order to help rather than harm; phlebotomy should be followed by a draught of a cool electuary that restores moisture (ll. 230–238).

The text then surveys, somewhat more briefly, other illnesses that call for phlebotomy (ll. 239–274). In the case of any form of dropsy, bleeding should be done from the right basilica if strength and age permit, particularly in the case of tympanites and ascites (see Appendix C, s.v. “ashite” and

"tympanite"). Alexander advised bleeding a patient with lymphatic edema; this is efficacious if the evil humors are in the veins. After treatment, an electuary that comforts the liver should be given, for the liver is particularly weakened by dropsy. In the case of yellow or green jaundice, blood should be let from basilica of the right arm, and for black jaundice, from salvatilla of the left hand. For melancholy or mania, phlebotomy should be done from the vein between the thumb and forefinger of the left hand, a vein some call the *matrix*, although others use that term for the median vein. If further bleeding is indicated, the vein in the center of the forehead, the receptacle of black bile, should be cut. Hippocrates says that the forehead vein is particularly appropriate if the back of the head aches (ll. 239–257).

For consumption, bleeding should be done from the vein above the elbow, if strength and age permit, for that vein is particularly appropriate for lung disorders. For an overheated liver, blood should be let from basilica of the right arm. For disorders of the spleen, bleeding is advocated from salvatilla of the left arm and from that vein of the right arm for disorders of the stomach, particularly if the cause is heat (ME: if the cause is "colre"). For disorder of the kidneys, bladder, womb, for colic and iliac (ME adds aposteme), bleeding should be done from the interior sophena if phlebotomy is applicable; if that vein cannot be found, the text offers as an alternate vein that which goes to the great toe (see Appendix C, s.v. "colico" and "yliaco"). In the case of a mormal on the lower extremities, bleeding should be done first from basilica of either arm and then, if necessary, from sophena, and finally the legs should be scarified (see Appendix C, s.v. "mormale"). For gout, blood should be let first from basilica, then from sophena. For sciatica, particularly that of hot origin, bleeding should be done from the exterior sophena, a vein Constantine names *sciatica* because of its use in phlebotomy (ll. 257–274).

The Latin text ends at line 274. The English continues with a series of admonitions. It asserts that some men consider it unwise to let blood for tertian or other kinds of intermittent fever until after the fourth or fifth onset. Bloodletting should be done with care because danger is common. Sometimes the patient feels a prickling sensation on the skin and on the back and has carbuncles. In that case, the infection is outside the veins. Purulence outside the veins can be seen in the presence of carbuncles, cankers, and boils, and if it is drawn into the veins, it slays the victim. Foolish men who listen to other foolish men will let blood in these instances, and the consequent disorder is worse than the original one, for phlebotomy brings the infection, formerly outside the veins, into the veins and continual fever and death may ensue. Likewise, one can by letting blood—and drawing in the infection from outside the veins—transform an intermittent fever into a continual fever, and death will result (ll. 274–291).

Similarly, the text cautions against other types of error that careless or badly advised phlebotomists may commit. Avicenna, Walter, Galen, and

others point out that under every vein is an artery. The careless bloodletter may cut through the vein into the artery, and the arm will swell. Similarly, these careless practitioners may be so rough that in striking with the finger or an object they may pierce the vein into the artery and the blood may run inward as well as out and stay within and putrify. Then the arm swells for two reasons: the blood runs inward, and the artery is cut; death may result. Consequently, it is safer to slit the veins lengthwise with an instrument called a *warkyfe* as used by the French and to bleed those who have straight veins. The text concludes by observing that it has provided a sufficient discussion of phlebotomy according to Master Henry of Winchester (ll. 292–307).

APPENDIX C.

PROBLEM WORDS IN THE MIDDLE ENGLISH TEXTS

We have not thought it necessary to give a full glossary, for a number of reasons. The general reader not familiar with Middle English has available both a detailed summary of the text in Modern English (Appendix B) and the Latin text readily to hand for comparison, and the specialist in Middle English will consult the *Middle English Dictionary* and/or the *Oxford English Dictionary* for a full treatment of most of the terms. Furthermore, the text itself frequently makes clear the meaning of words; as we mentioned in the discussion of the translation above (pp. 30–31), the Englisher customarily takes care to explain a learned calque by pairing it with a native term, as for example, on l. 172, “acatarthies, *i.e.*, laxatif ygefen.” However, there are some words that may prove vexing or misleading—because the modern cognate of the word does not share the precise meaning, because the word has a different meaning from those found in the *Middle English Dictionary*, or because the word is found in the *Middle English Dictionary* under a variant listing.

Hence, we give a list of these problem words below, entering each word as it is spelled in its first occurrence, and listing only appearances where there are major differences in orthography beyond the common interchange of graphs of the *i/y* or *s/c* sort. *ȝ* is listed after *t*, *ȝ* after *w*, and the consonantal *u/v* after the vowel entry. Closely related words (*inanicioun/inanyssched*) are listed together. An asterisk (*) is used to indicate a word or spelling in the text “Of Blode Lyttyng” from Gonville and Caius MS. 84/166 found in Appendix A.

accesse (163), n., an attack of illness, especially a periodic attack of an intermittent fever. OF. *accēs*.

anentisiȝ (64), adj., empty of bodily fluids or humors; see *MED* s.v. *anientischen*.

antrace (19), n., a carbuncle or malignant boil.

antrax (282).

apofresim (24), n., the process of letting blood at intervals, a little at a time.

apoforesyn (98).

apostum (111), n., an inflammation; an abscess or festering sore.

**inpostym* (43).

ashite (241), n., ascites, dropsy of the abdomen.

asmite (27), n., difficulty in breathing; see *MED* s.v. *asma*.

boystus (298), adj., inept, lacking in skill.

bolned (58), p.p., swollen.

bolnyd (297).

caniculere (63), adj., pertaining to the dog days of July and August.

cardiaca (57), n., a disorder of the heart, characterized by pain and palpitation.

carnose (80), adj., fleshy, not lean.

causon (222), n., a form of acute or continual fever.

citrine, see colere.

colere (44), n., choler, red/yellow bile, the one of the four primary humors characterized as hot and dry. The text deals with four unnatural, pathological forms of the humor:

1. colere citrine (193), n., an unnatural, secondary form of the humor formed as a mixture with thin or watery phlegm.
2. colere vitelline (193), n., an unnatural, secondary form of the humor formed as a mixture with thick or great phlegm.
3. collere prassine (195), n., an unnatural, secondary form of the humor caused by the overheating of colere vitelline.
4. collere eruginose (195), n., an unnatural, secondary form of the humor caused by the further overheating of colere vitelline/prassine.

colico (265), n., colic; pain of the colon; abdominal pain, perhaps of the lower abdomen, in contrast with yliaco, pain of the upper abdomen.

cotidian (185), adj., n., daily; quotidian fever, a form of intermittent fever with daily recurrent paroxysms.

*quotidian (46).

cucurbites (149), n. pl., plants of the gourd family.

demyþ (17), 3rd pers. sing. pres. of demen, v., to judge.

dressid (267), p.p., directed.

dulce flewme, see flewme.

efimera (86), adj., n., a fever of short duration.

emoytoysi (258), n., a disorder characterized by bloody sputum? See *MED* s.v. emoptoic(us).

epymate (258), n., a disorder of the chest; see *OED* s.v. epimace.

eruginose, see colere.

*etyke (53), n., adj., a form of acute or continual fever.

etic (231), ethic (234).

exschuyng (28), pres.p. of escheuen, v., to eschew, to avoid, to escape.

*fell (7), adj., virulent, deadly.

file (223), adj., foul, vile? See *MED* s.v. filen, v. (2).

flewme (177), n., phlegm, the one of the four primary humors characterized as cold and moist; the text deals with three or four unnatural, pathological forms of the humor:

1. dulce flewme (180), n., an unnatural, secondary form of the humor formed as a mixture with blood and sharing in the nature of that humor.

2. salse fleume (180), n., an unnatural, secondary form of the humor formed as a mixture with choler and sharing in the nature of that humor.
3. fleume acetose (185), n., an unnatural, secondary form of the humor formed as a mixture with melancholy (black bile) and sharing in the nature of that humor.
4. fleume vitre (199), n., congealed or glassy phlegm; perhaps the unnatural mixture with melancholy (fleume acetose)—if so, in this case the sentence is not taking up another kind of fever but is emphasizing that one lets blood for fleume acetose only if the body is swollen.

front (253), n., forehead.

*garsyng (50), ger. of garsen, v., to scarify.

gernouses (279), n. pl., carbuncles?

gommes (230), n. pl., gummy pieces or lumps.

ileide (283), pp., laid, placed, applied.

yliaco (265), n., colic; pain in the ileum; abdominal pain, perhaps of the upper abdomen, in contrast with colico, pain of the lower abdomen.

inanicoun (66), n., a depletion of blood or humors.

inaynyte (64), adj., empty of bodily fluids or humors.

inanyssched (65), p.p., empty of bodily fluids or humors.

infusum (238), n., a liquid extract or solution.

*inpostym, see apostum.

interpolates (152), n. pl., adj., intermittent fevers; intermittent.

yponyd (46), p.p., opened.

*keyll (7), n., a sore, boil, ulcer; see *MED* s.v. kile.

leche fyngre (125), n., the finger next to the little finger.

leucoflamcie (241), adj., pertaining to lymphatic edema; see *MED* s.v. leucofleuma.

litargie (121), n., a tumor or abscess inducing lethargy.

*lytergia (40).

matrix (265), n., uterus.

melancolie (45), n., melancholy, black bile, the one of the four primary humors characterized as cold and dry.

malencolie (45).

meuyngis (198), ger. of moven, v., to move.

minision (3), n., phlebotomy, letting blood from a vein; many variants of spelling include

minucion (11), mynyscoun (113).

mynusche (87), subj., sing. pres. of mynuschen, v., to let blood from a vein; see also minysched (18), and minuschyngre (30).

mynuscheris (292), n., pl., bloodletters.

*moder (64), n., uterus.

normale (268), n., an inflamed sore, especially on the leg. OF. mort-mal.

*nider (65), adj., nether, lower.

nobylle membris (21), n. pl., parts of the body superior in status to other parts or members, as for example, brain or testicles.

none (44), n., the canonical hour of nones, 3:00 p.m.; noon, midday.

onavisid (292), pp., unlearned, imprudent, unresolved, unadvised, untaught.

ovþir (25), conj., either.

pascions (10), n. pl., painful afflictions; disorders of some part of the body; frequently in compounds, as sciatica pascoun (274).

plectoryk (10), adj., plethoric, swollen.

plicature (50), n., a folding, specifically, the inner part of the arm at the elbow joint.

*plykers (74).

potagre (270), n., podagra, gout.

prassine, see colere.

quartayne (200), n., a quartan fever, that is, a malarial fever where the paroxysms occur every fourth day, counting both days of occurrence.

reynes (136), n. pl., kidneys. OF. reins.

royde (298), adj., violent or rough; not a form of rude (contra *OED* s.v. rude), but the Northern roid; see *OED* s.v. roid.

salse fleume, see flewme.

*sals flewme (49).

schewyng (122)/schewyng fyngre (250), n., index finger.

scuwiþ (101), 3rd pers. sing. pres. of scuwen, v., to follow, ensue; see *OED* s.v. sue.

sed (237), adj., solid, as opposed to liquid? See *OED* s.v. sad.

sedis (149), n. pl., seeds.

sincope (27), n., syncope, loss of consciousness.

sinocha (26), n., a continual fever, caused by an excess of blood.

sinocham (98).

skelis (62), n. pl., reasons.

skal (142), skel (107).

sleþe (283), subj. sing. pres. of sleen, v., to slay.

sowneþ (7), 3rd pers. sing. pres. of sownen, v., to signify or mean; see *OED* s.v. sound.

spiritual (142), adj., pertaining to breathing or respiration.

spondiles (279), n. pl., vertebrae.

squinancie (127), n., quinsy; inflammation of the throat.

*swynese (42).

stiptik (129), adj., styptic, astringent.

terce (43), n., the third canonical hour of the day; 9:00 a.m.

tercyane (189), n., a tertian fever, that is, a malarial fever where the paroxysms occur every third day, counting both days of occurrence.

3^{ne} (162), 3^{ana} (199).

tympanite (240), n., abdominal distention caused by gas or air; classified in medieval medicine as a form of dropsy.

Pomble too (138), n., the great toe.

Pombe too (267).

vneth (47), adv., scarcely; with difficulty.

unwarf (292), adj., unwary; careless.

unware (296).

ventosynge (228), ger. of ventosen, v., to withdraw blood with a cupping glass.

vesice (264), n., bladder.

vestellis (290), n. pl., blood vessels.

vercellis (291).

vice (259), n., defect, deformity, or imperfection in some part of the body.

OF. vice.

vise (264).

vitelline, see colere.

ware (301), n., pus, matter.

warkyfe (305), n., a corruption of a compound noun wark-knyfe, working knife or instrument? Gloss clarifies that it is a form of lancet.

warli (277), adj., cautiously, carefully.

wes (213), v.?, was? should be?

weston (223), p.p., wasted.

wode (19), adj., mad, raging.

*zoking (50), ger. of zoken, v., to itch.



Plate I. Miniature depicting bloodletting scene from mid-fifteenth-century Latin manuscript of the *Inventarium* of Guy de Chauliac in Bristol, Avon County Library, Reference Library MS. 10, fol. 230. Reproduced with permission of the County Reference Librarian, Avon County Library, Bristol.

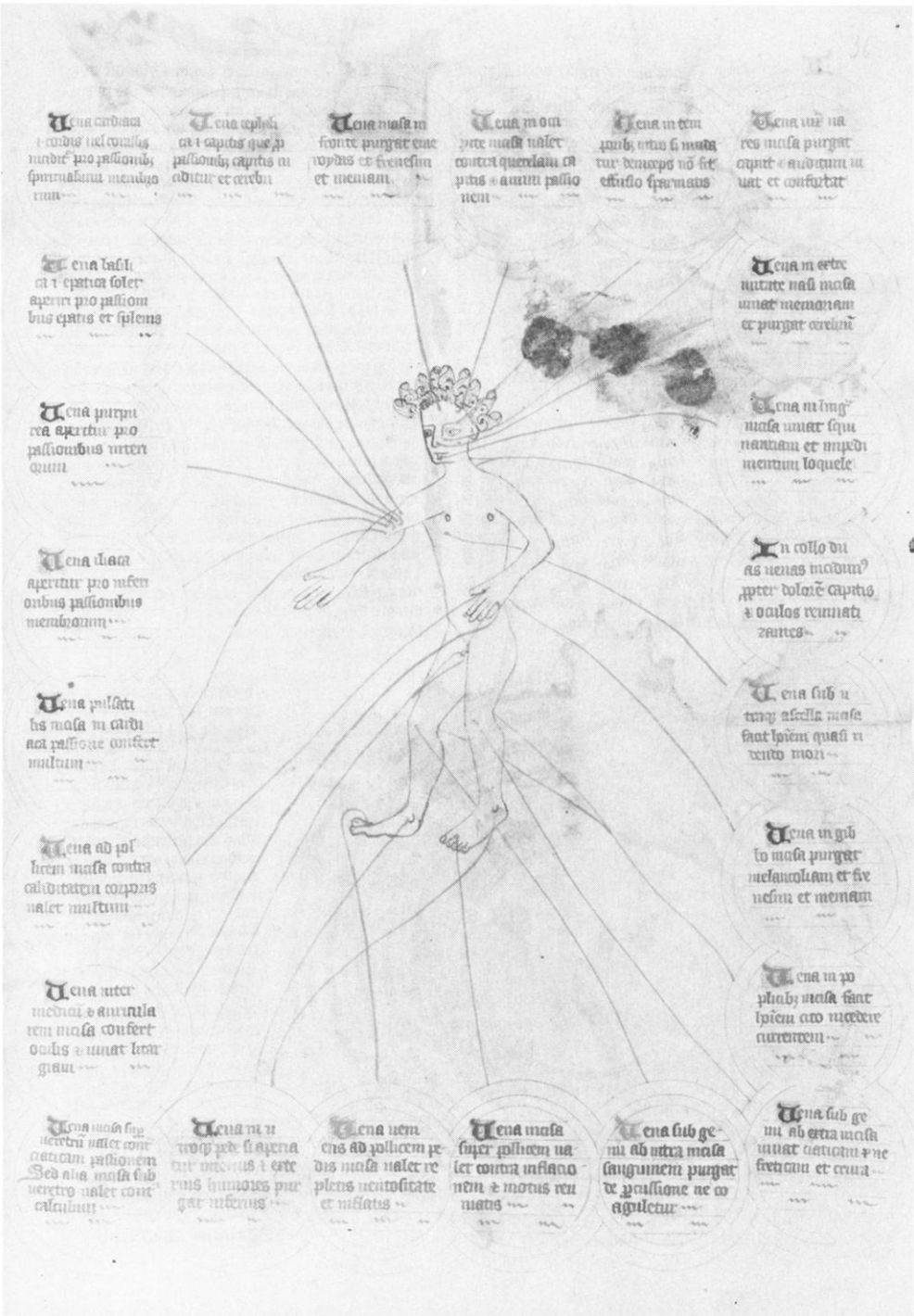


Plate II. Diagram illustrating vein points for bloodletting from a manuscript of the fifteenth century, Oxford, Bodleian Library Ashmole MS. 789, fol. 365. Reproduced with permission of the Keeper of Western Manuscripts, Bodleian Library.

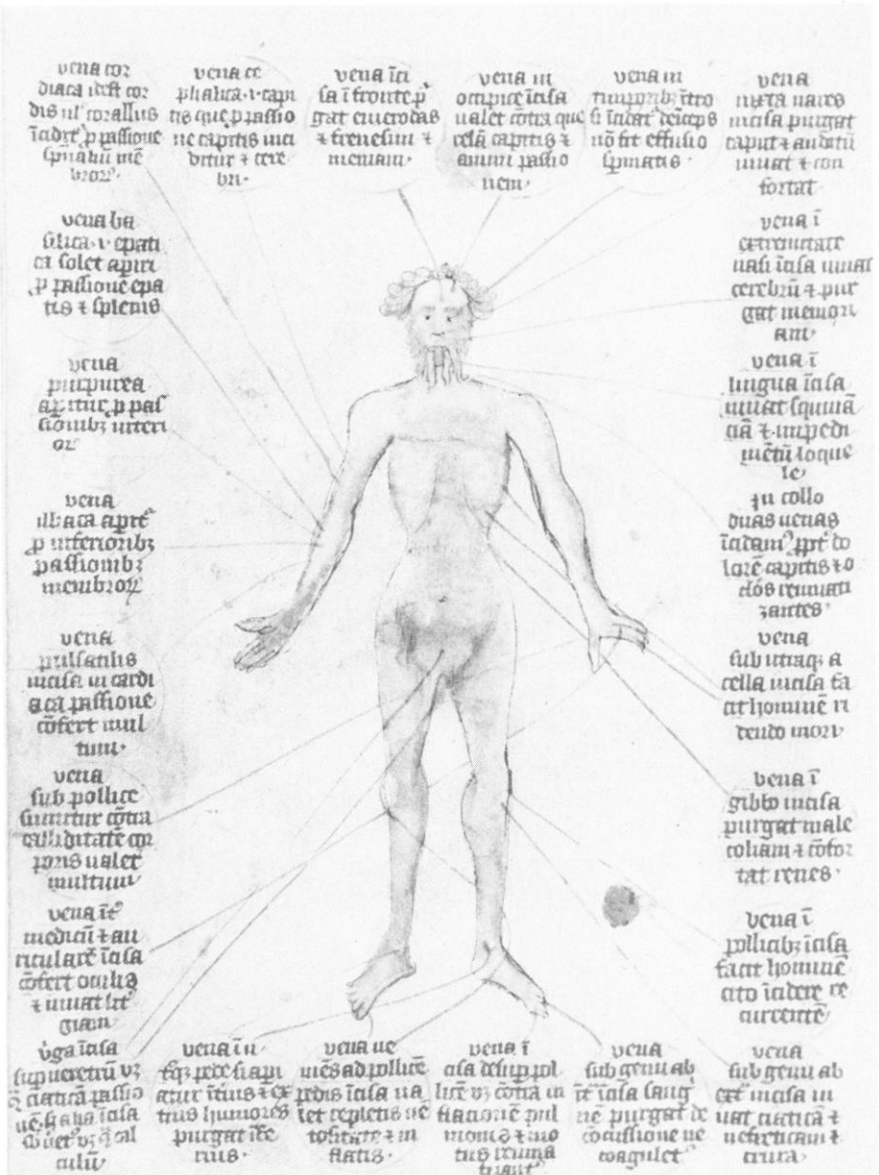


Plate III. Diagram illustrating vein points for bloodletting from a 1384 *Horae* written at the Augustinian Priory at York; fol. 31v in a manuscript owned by Irwin J. Pincus, M.D. Reproduced by permission of Dr. Pincus.

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